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INDUSTRIAL WEEK

Work Starts Soon on New Swift Liquid Fertilizer Plant at California Site

HAYWARD, CAL.—Swift & Comny will begin construction soon of complete liquid fertilizer plant uth of the city limits in the Merced ustrial center, Edward R. Jacobs, nager of the Swift plant food facry at Hayward, announced.

The plant when completed will nufacture aqua ammonia, comete liquid mixed plant foods, amonium phosphate solutions, and her solutions. The plant will also ve available regular and special grades of plant food products, insecticides and raw materials.

Jacobs said Swift will offer growers complete plant food and insecticide service including growers advisory service throughout the Merced county area. The plant will have equipment available for making application of both dry and liquid mixes for those who desire such service. Provisions will be made for servicing those who have their own hauling and spreading equipment.

hemagro Consolidates Its Agricultural hemical Activities in U.S. and Canada

NEW YORK — Consolidation of agricultural chemical activities Pittsburgh Coke & Chemical Co., ttsburgh, Pa. and the Farbenbriken Bayer A.G., Leverkusen, rmany, has been announced by the emagro Corporation. The consolition affects operations in both the ited States and Canada.

This move makes Chemagro "alost unique in combining complete anufacturing, research and sales facilities for the sole and exclusive purpose of serving the agricultural chemicals industry," a company spokesman said.

Farbenfabriken Bayer has become well-known in the development and manufacture of agricultural chemicals, having developed products such as parathion insecticide, Systox systemic insecticide, and Dipterex bait-type fly killer.

(Continued on page 5)

pencer Announces New Facilities for qua Ammonia, Nitric Acid Production

ANSAS CITY — New facilities the production of aqua ammonia concentrated nitric acid have n announced for Spencer Chemi- Co.'s Henderson, Ky. Works by neth A. Spencer, president of the .

he new additions will permit ter diversification of the amnia production at Henderson; how- , no increase in ammonia capac- is planned. The aqua ammonia t is under construction and sched- for completion by May 1.

Plans for the concentrated nitric facilities are still in the design ge with construction scheduled to begin in October and completion expected about the first of the year. The new facilities will produce up to a 68% nitric acid as compared with the 55% acid now being made by the present units at Henderson. Nitric acid storage, blending, truck and car loading facilities will complete the project.

The Henderson Works has been operated by Spencer since 1950 when the plant was purchased from the government. The new facilities will complement the anhydrous ammonia, nitric acid and ammonium nitrate solutions now produced at this location.

onstruction of Calspray Multi-Million ertilizer Plant Passes Halfway Mark

—See Photo on Page 20—

RICHMOND, CAL. — P. S. Wilms, chief engineer of California ray-Chemical Corp., recently reased an interim report on the proess of the various portions of the lti-million dollar fertilizer plant ng built near Richmond, Cal.

In his report Mr. Williams stated at construction has passed the alfway mark on schedule and that alspray is expecting to be able ship the first nitric acid about ay 15 this year.

Other portions of the operation go "on stream" as they are pleted, the last of which is expected to be producing by fall of this year.

The fertilizer plant is a radical departure in the manufacture of synthetic plant foods, Mr. Williams said. Instead of using sulfuric acid to break down phosphate materials for infusion into complex mixed fertilizers, Calspray's plant will use nitric acid obtained through processing basic raw material produced by Standard Oil Co.'s new anhydrous ammonia plant.

With nitric acid as the main acidulant and by-product sulfuric acid or phosphoric acid as the secondary

(Continued on page 20)

More Than 1,000 Expected at Second NPFI Convention

WASHINGTON — Outstanding leaders in the field of government, industry and agricultural communications will be heard at the second annual convention of the National Plant Food Institute at the Greenbrier, White Sulphur Springs, W. Va., June 10-13, 1956.

A record attendance of more than 1,000 persons is expected by officials of the institute.

Sen. J. W. Fulbright (D., Ark.), chairman of the Senate Committee on Banking and Currency, and internationally-known in the field of foreign affairs, will be the principal speaker at the June 12 session.

A panel on salesmanship will be featured at the opening session on June 11. The speakers will be Dr. J. M. Bohlen and Dr. George M. Beal of Iowa State College, who will make a visual presentation of the results of an extensive survey on "Who Influences the Farmer," and Glenn R. Fouche, president the Stayform Co., Chicago, who will speak on "Dramatize Your Selling."

John Ott of John Ott Pictures, Inc., Winnetka, Ill., nationally-known motion picture producer and authority on time-lapse photography, will present a movie on "How Flowers Grow," especially for the ladies, June 11 and a movie on "Seeing Plants Feed" will be presented to the general session June 12.

Joseph A. Howell, president of the Institute will preside at the sessions. He and other staff mem-

(Continued on page 17)

Inorganic Chemical Production Shows February Decline

WASHINGTON — Production of synthetic anhydrous ammonia during February totaled 275,121 short tons, a dip of 1% from output of 279,055 short tons in January, according to the Bureau of the Census.

February production of ammonium nitrate, original solution (100% NH_4NO_3) was 200,198 short tons, off 5% from 210,201 short tons in January.

Output of phosphoric acid declined 5%, from 329,101 short tons in January to 313,691 short tons in February. Nitric acid production dipped 3%, from 216,361 short tons in January to 209,344 short tons in February.

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Congress Votes High Support Farm Measure

Doubt Seen That Either Body Could Override a Veto

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON — Congress last week passed the farm bill with a vote that leaves great doubt that either House or Senate could or would override a veto.

The House approved the compromise measure by a vote of 258 to 181, and the Senate approved it 50 to 35.

The administration already has publicly termed the measure "unacceptable," which leads to the conclusion that the measure faces a White House veto.

The complications arising out of the threat of war in the Middle East now are a vital factor in the farm bill outlook. Unless that threat makes itself known in real terms, it is believed here that the President will veto the measure.

It is believed that the President can veto this bill and leave to Ezra Taft Benson, secretary of agriculture, the task of administrating present legislation.

Under broad terms of the present law, the secretary of agriculture may, at his discretion, fix all price support levels at any point he deems in the interest of national security.

The best advice from here to the plant food industry is that barring an outbreak of war in the Middle East—a not improbable conclusion—American farmers can go ahead with their current crop intentions plans without any further attention to this Congress.

As seen from here the congressional vote on the farm bill resolves itself into nothing less than a veto at the White House.

Plans Made for War On Mormon Crickets

Control Program to Continue Two Months

DENVER, COLO.—Activity toward launching of the 1956 Mormon cricket cooperative work in a number of western states is now getting under way, according to James R. Dutton, project leader of the grasshopper control project of the U.S. Department of Agriculture here.

Bid invitations have been issued by the Albany, Cal., regional business office of the USDA Agricultural Research Service, for 127 tons of aldrin-oil-rolled-wheat bait and for the application of bait by aircraft on some

(Continued on page 17)

Considerations in Determining Residual Amounts of Pesticide Materials Reviewed At American Chemical Society Convention

DALLAS, TEXAS—Discussions of analytical methods of determining amounts of pesticidal residues remaining on harvested crops, were prominent on the pesticides subdivision program of the American Chemical Society which held its spring meeting here April 8-13. The pesticide portion of the program, held April 12, was under the chairmanship of Joseph A. Noone, NAC Assn., Washington, D.C. Hobart O. Thomas was secretary and presided at the general opening session on the morning of April 12.

A paper prepared by Mervin E. Brokke, Ulo Kiigemagi and L. C. Terriere, of Oregon State College, Corvallis, described use of a modified colorimetric method of determining aramite residues. They reported that difficulty had been experienced in determining small amounts of aramite colorimetrically since inconsistent results are frequently obtained.

However, a new method based on the color-producing reactions of formaldehyde, gives approximately the same degree of sensitivity as the original method, requires less time and makes use of reagents more easily obtained and controlled, the authors reported.

Irwin Hornstein, USDA, Beltsville, Md., described colorimetric methods of analysis for toxaphene. He reported that toxaphene can be estimated to 0.5 mg. by treating an isopropyl alcohol solution of toxaphene with an aqueous solution of thiourea and potassium hydroxide.

A second paper by L. C. Terriere and Ulo Kiigemagi of Oregon State College, described a simplified bioassay for insecticide residues which involves use of mosquito larvae, Culex quinquefasciatus. This bioassay method, they said, fulfills the need for sensitive and simple analytical methods for the determination of insecticide residues. Most of the chlorinated hydrocarbons and several of the organic phosphates can be determined with greater sensitivity with existing chemical methods, they declared. Levels as low as 0.02 ppm can be measured.

Using this bioassay technique, untrained personnel can handle from 6 to 12 samples a day, with results being obtained in 24 hours. The method has been used on crops such as potatoes, carrots, onions, beans, broccoli, strawberries, and alfalfa as well as on soil. The authors reported that excellent agreement with chemical method has been obtained in several instances in which the two techniques have been compared.

Whether or not 8-quinolinol fungistatic rather than fungicid was the subject of a paper by S. Block, University of Florida, Gainesville.

He said that although 8-quinolin (oxine) has been employed commercially as an antimicrobial for o 60 years, recent work has suggest that this compound is nontoxic microorganisms. In the case of b teria, the known toxicity is attr uted to the conversion of oxine bactericidal metal chelates by re tion with metal salts in the medi The paper offered evidence to sh that 8-quinolinol, itself, is toxic fungi and that it is fungistatic rat than fungicidal. The industrially portant copper chelate of 8-quinoli was found to be similarly fungista and not fungicidal.

"Deactivation of Mineral Carr in the Preparation of Stable Hepta lor Formulations" was the title o paper prepared by Marshall A. lina, Arthur Goldman, Leo Trade and Percy B. Polen, all of the Ve col Chemical Corp., Chicago.

They explained that some insecticidal dust and granular formulations made with heptachlor sho poor storage stability, whereas t same insecticide in liquid formulations exhibits excellent stabili under comparable conditions. T observed loss in insecticidal acti ty has been shown to be due decomposition of the insecticide a result of the catalytic activity some of the minerals used in t formulations.

Investigation was made of poss physical or chemical methods of ducing the catalytic activity of ac minerals and the common carr and diluents have been classi with respect to their activity tow heptachlor.

Many chemical additives w screened in a preliminary study this phenomenon. It was found oxygenated chemicals, including cohols, glycols, and ketones, played inhibition of decomposi Study of promising additives made for relative effectiveness deactivation, compatibility w other agricultural chemicals, e omic comparison, and ease of for lation.

The afternoon session of Apr was under the chairmanship of W Phillips, and saw the presentatio four papers covering residues their relationship to provisions o Miller amendment.

A paper by Tom G. Bowery, ert L. Rabb, Frank E. Guthrie Robert J. Monroe, of the North lina Agricultural Experiment tion, Raleigh, gave a detailed count of methods used in dete residues of TDE and endrin on t co. These studies included a sta cal evaluation of field sampling and a prediction of the sample required for any desired degr precision. The paper also gave scription of procedural steps ut in the adaption of specific c metric methods of analysis t determination of TDE and end n-hexane extracts of tobacco tobacco products.

R. W. Fogleman, of the Haz Laboratories, Falls Church, presented a paper on resi studies in the development of agricultural chemicals. It po out the desirability of correl entomological levels of effec ness and the actual residues ried on crops at harvest time. In the development of a new cultural chemical, the paper industry carries the responsi of coordinating entomological,

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logical and residue studies which ill result in a well-rounded pro-ram with considerable savings of esearch time and money.

Thomas H. Harris, pesticide regu-tion section of the Agricultural Re-arch Service, USDA, discussed in s paper the preparations necessary arrive at an opinion as to the mounts of residues likely to remain specified crops at harvest time hen the insecticide in question is ed in accordance with the pro-sed directions.

In connection with the provisions the Miller amendment, the USDA given two responsibilities; first, a rtification as to the usefulness of ch pesticidal chemical for which a lerance is sought, and second, the inion regarding residues at har-st. Mr. Harris emphasized that merous factors must be taken into nsideration when it comes to ar-ving at an opinion, in order that may rest upon a "reasonably sound sis."

Frank A. Vorhes, Jr., of the Food d Drug Administration, Washing-n, D.C., outlined some of the re-irements of analytical data sup-rting residue tolerances. The Mil-amendment, he said, authorizes sticide residue tolerances as a eans of providing safe and practi-l exception to the Food and Drug t's general prohibition of any ded poisonous or deleterious sub-nce, whatever, in food.

Mr. Vorhes pointed out that ex-rience in review of a substantial mber of pesticides, as well as data support of proposals of similar ture, acts as a guide in noting that rtain elements of consideration al-ys apply while other important ements may apply only part of the ne. The paper discussed some of ese recurrent aspects which are to considered by chemists in arriv-at specific pesticide residue study ns.

lifornia Growers n Reduced Acreage

SACRAMENTO—If growers carry t their present expressed inten-ns, an aggregate total of about 16,000 acres of principal field crops ll be planted in California in 1956, e California Crop and Livestock porting Service announced.

This would be about one per cent s than the 6,699,000 acres planted 1955 and the smallest acreage ce 1951. The record high was 7,-9,000 acres planted in 1954.

Present indications point to an in-ease in the planted acreage of oats, rley, sugar beets and grain hay ile reductions are indicated for eat, corn, flaxseed, rice, potatoes d beans. Planted acreages intend-for grain sorghums, alfalfa hay d other hay are the same as for 5.

Weather conditions have been fav-ble for farming operations in the uth half of the state, but in the rth half work has been delayed by avy winter rainfall and wet soils.

rogen Division oducing New Product

NEW YORK — Nitrogen Division, ied Chemical & Dye Corp., has an-nced that it is producing at its th Point, Ohio, plant a new urea-maldehyde solution. According to firm, the solution "will enable fer-er manufacturers to produce ular-type fertilizers containing g-lasting organic nitrogen for n, gardens and specialty crops." new solution is called "N-dure."

WEEVIL THREAT

OLLEGE PARK, MD.—The al-weevil is expected to do severe ge to alfalfa in all Maryland ties this year except Allegany Garrett, according to Ted Bis-University of Maryland exten-ntomologist.

Changes Announced In Crag Agricultural Chemicals Personnel

NEW YORK — Three personnel changes have been announced by Dr. R. H. Wellman, manager of the Crag Agricultural Chemicals Division of Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp.

Robert E. McKenzie, formerly area representative in New York and New England, has been transferred from the sales group to the technical development group. He will make his new headquarters in San Francisco. Mr. McKenzie, who joined Carbide in 1952, received the degree of master of science in entomological toxicology in 1952 at the University of California. He received his bachelor of science degree in entomology at the University of California in 1951.

Edwin M. Miller has joined the sales group for Crag agricultural chemicals in the New York office. Mr. Miller was graduated from the University of Maryland in 1952 with a bachelor of science degree in horticulture. He was previously with Miller Chemical Corp., Charles Town, W. Va.

Francis A. Pastor, a graduate of Louisiana State University, is now with the sales group for Crag agricultural chemicals in the New York office. He received a bachelor of science degree in agronomy from LSU in February, 1956. Mr. Pastor had additional training in his field while employed at Boyce-Thompson Institute for Plant Research, Yonkers, N.Y.

FUNGUS INFECTION

REDONDO BEACH, CAL. — This community's Phoenix date palms are being threatened by a fungus infection, which has caused removal of 40 of 100 trees.

Missouri Fertilizer Shipments Hold Steady Pace in 1955

COLUMBIA, MO. — Manufacturers reported a total of 771,556 tons of fertilizers shipped in Missouri during 1955, compared with 771,375 tons in 1954. The 1955 figure includes 212,415 tons of rock phosphate, while the figure for a year earlier includes 121,748 tons.

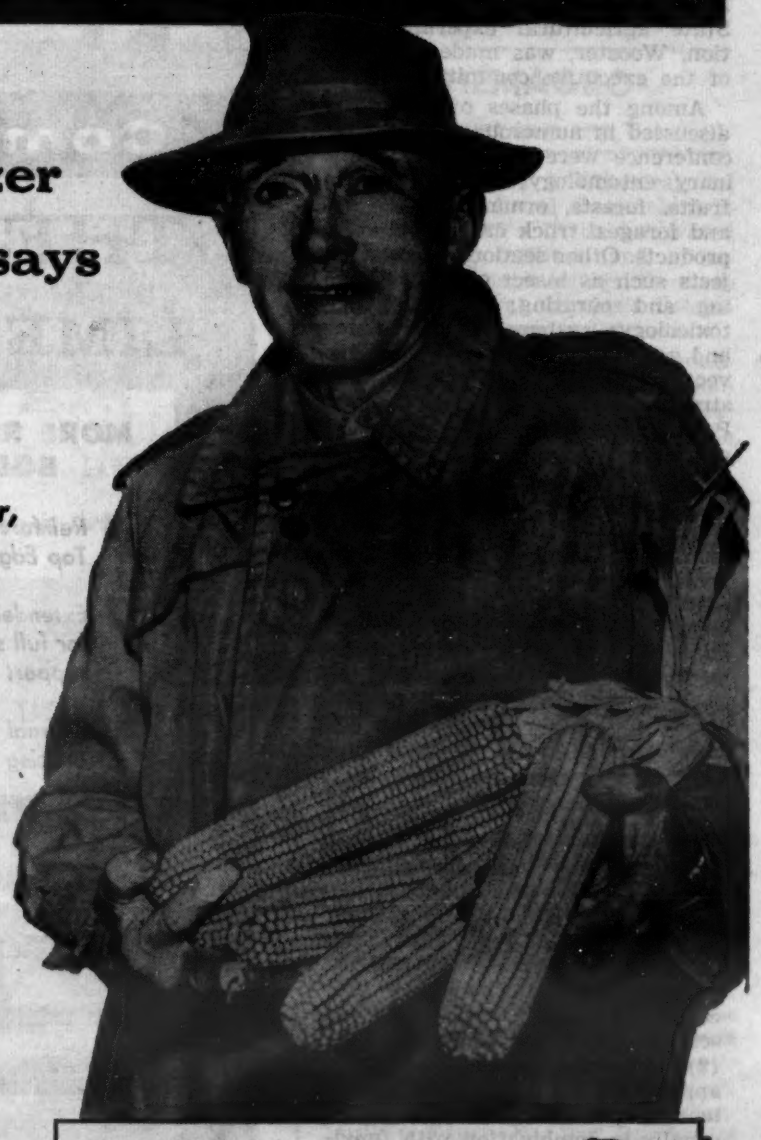
The 1955 shipments include 449,871 tons of mixed fertilizers with an average analysis of 7.88-14.19-11.19, while in 1954 517,244 tons of mixed goods were shipped, with an average analysis of 7.30-14.42-10.80. Shipments of fertilizer materials, excluding rock phosphate, were 109,270 tons in 1955 and 132,383 tons in 1954.

Spring sales of mixed goods in 1955 totaled 268,648 tons, while fall sales totaled 181,223 tons.

HOW UNION BAG BUILDS MORE BUSINESS FOR THE FERTILIZER INDUSTRY

"I insist on fertilizer in Multiwall bags," says world champion corn grower

Willard C. Kirk, farmer, Jeffersonville, Ohio



"Science rules on my farm," says Mr. Kirk, winner of many "ten ears" awards and trophies. "I rotate strictly so as not to rob my soil—soybeans and oats, one year each; pasture, two years; then corn, one year. I use lots of fertilizer, and prefer it packed in 80-lb. Multiwalls. I find Multiwalls easy to handle and store, and to open and empty completely. Also, fertilizer does not sift out of these paper bags."

Union Bag fosters science on the farm

Many farmers, like Mr. Kirk, get tips on fertilizer use through the information program of Union Bag & Paper Corporation, which provides basic data for newspapers, magazines, and radio and television stations.

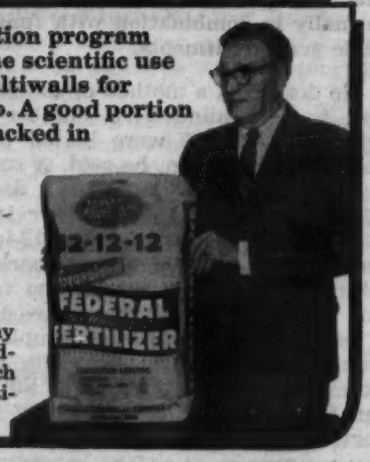
Union's country-wide educational program is designed to increase fertilizer consumption. More and more of the output of this growing industry is being marketed in Union Multiwall bags.

As farmer and dealer preference for fertilizer-in-multiwalls continues to grow, so does manufacturers' preference for Union Multiwalls.

Are you completely posted on all the recent advances in multiwall packaging of fertilizer? We will be glad to show you some of the new Union sacks the industry is now using so successfully.

"Union Bag's information program will help farmers in the scientific use of fertilizer. Union Multiwalls for fertilizer help them too. A good portion of our production is packed in Union Multiwalls."

Mr. John R. Sargent, Vice President in Charge of Sales, Federal Chemical Company, Louisville, Ky.



Federal Chemical Company supplies America's "breadbasket" with fertilizer, much of it packed in Union Multiwall bags.

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Use of Soil Insecticides Reviewed as North Central Entomologists Hold Meeting

LAFAYETTE, IND. — Insects and insecticides for their control were viewed from many sides as some 385 persons from 30 states and a number of countries converged on the Memorial Union of Purdue University here to attend the eleventh annual conference of the North Central Branch of the Entomological Society of America. The three-day conference began March 28.

The branch elected as chairman for 1956, C. E. Mickel, head of the department of entomology, University of Minnesota. He succeeds Dr. Harold Gunderson, Iowa State College extension entomologist. Dr. D. A. Wilbur, Kansas State College entomologist was named chairman-elect, to take office in 1957.

Other officers elected were Curtis W. Wingo, University of Missouri, secretary-treasurer, and Roy Rings, research entomologist at the Ohio State agricultural experiment station, Wooster, was made a member of the executive committee.

Among the phases of entomology discussed in numerous papers at the conference were medical and veterinary entomology; insects affecting fruits, forests, ornamentals, cereals and forages, truck crops, and stored products. Other sections covered subjects such as insect collecting, rearing and curating; physiology and toxicology; systematics, morphology and genetics; ecology and bionomics; vectors of plant diseases; and instruction and teaching. A tour of the Purdue University entomology department was held on the final day of the program.

A paper, "Recent Trends in Wireworm Control" was presented by John H. Lilly, Iowa State College, Ames. He said that before the advent of chlorinated hydrocarbon insecticides, practical control of wireworm was nearly impossible. Planting to non-susceptible crops like soybeans and late planting of corn helped to avoid complete loss of a crop, "but the average farmer is not satisfied with these as control measures," he observed.

The Iowa entomologist emphasized that developments in wireworm control since the introduction of BHC and other persistent soil insecticides in the 1940's, fall into three categories: (1) General aspects, including sampling procedures and basic laboratory research under controlled conditions. (2) Soil insecticides used as direct applications in the soil. (3) Soil insecticides used as seed dressings, usually in combination with fungicide seed treatments.

He described a method of sampling soil to determine the number of wireworms. Traps were baited with spoiled shelled corn, he said. A small handful of corn is buried to a depth of 3 to 4 inches, the soil over it is firmed with the foot, and a 12-inch garden label is inserted as a marker. "After from 1 to 3 weeks, the trap and surrounding soil are removed to a depth of 6 inches, the sample is spread on a piece of tarpaulin and examined manually. Up to 75 worms per trap have been found," he reported.

Dr. Lilly also told of experiments with radioactive cobalt to trace the movements of wireworms in insecticide-treated soil as compared to control plots. This technique enables the experimenter to follow the underground movements of the worms without disturbing them in any way, he pointed out. It was also pointed out that cobalt is also being used to study possible repellent and attractive properties of various seed treatment insecticides.

The importance of bringing together all the available information on wireworm taxonomy was also emphasized by the speaker. He said that it is doubtful that any more than the surface has been scratched in this phase of research. He told of efforts now under way in Canada to obtain more basic information on wireworm biology and physiology. "Among the phases under investigation," he said, "are food preferences and the effects of nutrition on growth, the effects of temperature on movement and feeding, studies on life history and metamorphosis, and the way in which the insecticide seed treatments act on wireworms."

In discussing problems in connection with broadcast application of soil insecticides, Dr. Lilly said that wireworms can be controlled in corn and other cultivated crops through this method, providing correct dosages are used. Two pounds per acre of aldrin or heptachlor do a good job on mineral soils in the Middlewest if they are incorporated into the soil by disking immediately after application. Higher dosages are required on peat or muck land.

In describing the results of soil insecticides banded along the rows, he said that for the first time in 1955, "we obtained practical wireworm control with one pound of either heptachlor or aldrin mixed with the starter fertilizer so as to give a dosage of 1 lb. actual insecticide an acre. The treated rows had normal stands and yields, while adjacent untreated control rows were seriously damaged. We are now investigating the same insecticides impregnated on light granular carriers applied in the planter trench with the hope that we con obtain still better wireworm control with even lower insecticide dosages.

"Probably the most widely used and important chemical measure for wireworm control is the use of seed dressings on wheat in Canada," Dr. Lilly said. He explained that the dosage is calculated on the acre basis instead of so much per bushel; 1 oz. gamma BHC ordinarily gives commercial control and is a fairly standard recommendation. "Recently, however, interest has developed in other insecticides, particularly aldrin, heptachlor and dieldrin, for the same usage," he reported.

The Iowa entomologist discussed briefly insecticide seed treatments on corn, reporting that during the 1955 season, some seed companies treated

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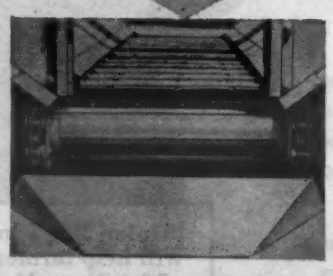

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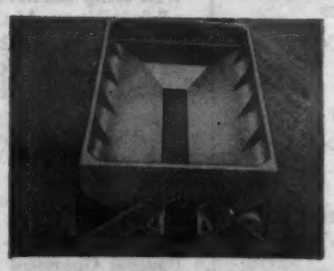

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their corn with low dosages of insecicide at the same time the fungicide was applied. Before, farmers had made a practice of stirring powdered insecticide into the seed in the planter box. Dr. Lilly said that while the practice of treating seeds with both insecticides and fungicides is expanding this season, it is "by no means universal among seedsmen."

James A. Beal, chief of the division of forest insect research of the USDA Forest service, described recent developments in control of forest insects. He said that insects rank first among the causes of timber mortality, being responsible for 28% of the mortality in timber of commercial size, and 40% of the mortality of trees of sawtimber size.

In the latter category, he said, insects outrank disease by a ratio of 2-1, and fire by a ratio of 7-1. In 1952, he said, insects are estimated to have killed 6 billion board feet of sawtimber and an additional 2 million cords of pulpwood. It was also pointed out that insects damage forests in ways other than killing of trees.

Thus, during the past few years, increased interest has developed in finding ways and means of coping with the forest insect problem. This has been brought about, he said, through the increased values of timber, by a better understanding of the extent of forest insect-caused losses, and the development of better control methods.

This increased interest, he said, is resulting in an ever-increasing demand for the services of trained forest entomologists, and in better coordination between federal, state and private organizations in the field of pest control. Effective means of controlling various forest pests have been used over wide areas. One successful method has been through the use of airplanes, which both reduce the cost of detection and permit access to remote areas.

"Aerial spraying with DDT has become standard practice for the control of certain forest defoliators during the past few years," Mr. Beal said. "To date, some 11 million acres of spruce budworm infested forests have been sprayed from the air in the United States and Canada. In addition, there have been aerial spraying projects in this country against the Douglas-fir tussock moth, gypsy moth, white pine butterfly, hemlock looper, forest tent caterpillar, pine looper, Saratoga spittlebug, some sawflies, and other defoliators.

"Insecticides such as benzene hexachloride and ethylene dibromide are proving to be effective in the control of certain bark beetles and other pests of trees, logs and lumber, when applied with ground equipment.

"Developments in the field of silvicultural control have shown that excellent protection from the western pine beetle can be obtained by harvesting the beetle-susceptible trees. This method is being extended where applicable to additional pine stands. Certain hybrid pines as well as some strains are showing resistance to the reproduction weevil in the West. Further work on insect resistant varieties should be rewarding."

The speaker told of steps being taken in biological control of insects, as well as management practices that attempt to keep losses at a minimum level. Salvaging operations are proving helpful, he said, and trap trees felled to attract and concentrate in one place hordes of flying beetles are helping to control Engelmann spruce beetles in Montana.

Dr. B. A. Porter, head of the fruit insect section of the entomology research branch of USDA, Washington, D.C., and president of the parent Entomological Society of America, addressed the group during the conference.

Official representatives of Purdue University extended a welcome to the visiting entomologists. Dean H. J. Reed, director of agricultural activites at the University spoke at the banquet on March 28, and Dr. J. J. Davis, head of the department of entomology, was toastmaster at the same event.

George E. Gould, Purdue entomologist, was chairman of the local arrangements committee.

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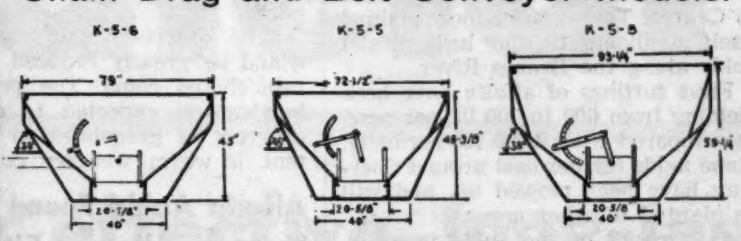

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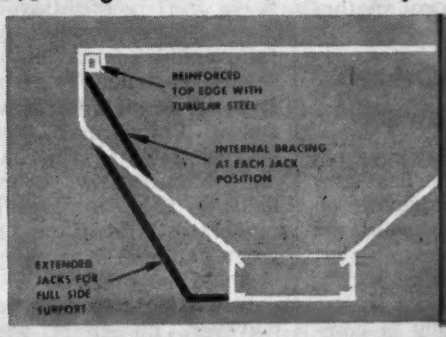

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CHEMAGRO

(Continued from page 1)

Pittsburgh Coke & Chemical entered the agricultural chemicals field in the late 1940's. With integrated manufacturing facilities and a nation-wide sales organization, the company's agricultural chemicals division established its name in the industry.

Chemagro Corporation was established in 1950 to introduce Farbenfabriken Bayer's new agricultural chemical products to the U.S. farm market. Pittsburgh Coke acted as the principal manufacturing source for Chemagro and also marketed several of its products.

The complete integration of the two companies' respective agricultural chemical activities now enables Chemagro to operate as an autonomous organization with complete control of its own manufacturing, research and marketing facilities, the announcement stated.

George W. Hill, Jr. will continue as president of Chemagro. Herbert F. Tomasek will serve as vice president, and W. Scott James will be assistant to the president.

Director of manufacturing will be Dr. Robert C. Scott. Sites for the company's first manufacturing plant are now under study.

Dr. Rosmarie von Rumker has been appointed director of research and Gordon M. Williams will serve as assistant director of research. Formerly associated with Farbenfabriken Bayer, Dr. von Rumker is familiar with that company's techniques in research and product development.

Chemagro's new sales department will be directed by Hugh H. Swink and B. Thomas Snipes, who will serve as director and associate director, respectively. Pittsburgh Coke's agricultural chemicals sales and research staffs will be integrated with the Chemagro sales and research departments.

Pennsalt Expansion

PHILADELPHIA — The Pennsylvania Salt Manufacturing Co. has announced expansion of chlor-caustic facilities at its Calvert City, Ky. works as part of its $55 million growth program. "The new unit will increase chlorine production from 50 to 150 tons a day with accompanying increase of rayon grade caustic soda production," William P. Drake, president, said. "It is anticipated there will also be an increase in caustic potash production."

INSECT, PLANT DISEASE NOTES

Pea Aphids Damaging Fields in Missouri Areas

COLUMBIA, MO. — Pea aphids have been building up extremely fast throughout the week over almost the entire state. So far, the most damaging infestations are being found in the southern half of the state, but it now looks as though it will be only a matter of time until fields in the northern counties will be infested to the same degree.

In the southwestern counties particularly, spotted alfalfa aphids seem to be increasing very rapidly. In that section of the state, at least, it begins to look as though this insect will be a serious pest this season.

Fields that are being heavily damaged by either, or a combination of both, of these aphids should be sprayed immediately. We believe that many fields in the southern portions of the state have already had first cuttings reduced by at least 15%. Reductions will be much greater during the next two or three weeks since aphid populations are now so heavy.

Benefits resulting from spraying for pea aphids are much greater if the spraying is done early. Even though the aphids can be killed after they have set the crop back three weeks, the alfalfa will not overcome this damage in time to yield a normal cutting. For best results, temperatures should be 65° or higher when the insecticides are applied. Wind velocity must be no higher than about 12 miles per hour.

We are also finding damage from another aphid—the greenbug which infests small grains. Check carefully all fields of barley and wheat—especially those fields that are showing "dry weather" damage. At least part of that so-called dry weather damage is aphid injury.—Stirling Kyd and Geo. W. Thomas.

Low Incidence of Leaf Rust Predicted for Oklahoma

STILLWATER, OKLA.—Leaf rust in 1956 will probably damage the Oklahoma wheat crop less than at any time since 1948, according to evidence collected by H. C. Young, Jr. and D. F. Wadsworth of the Oklahoma Agricultural Experiment Station. Their report stated that drouth conditions during the fall and winter allowed only a small carryover of inoculum, and that none of the later precipitation has occurred at a temperature satisfactory for leaf rust spore germination.

Periodic checks throughout the winter at Stillwater have not revealed a single pustule of rust, they report. During a 2,500 mile survey of the state, leaf rust was found at only two locations, and that in only trace amounts. "Such a small quantity of inoculum at this date has been observed only once (1948) in the past 18 years," the report says.

Maryland Counts Numerous Early Season Pests

COLLEGE PARK, MD.—In southern Maryland, grubs of the clover leaf weevil, adult clover root curculios, and pea aphids are present in alfalfa and clover fields in light numbers. Warm weather will promote the hatching of the meadow spittlebug and cause adults of the alfalfa weevil to become active in hay fields. On the Eastern Shore it will soon be time to apply the first spray on alfalfa for the control of the alfalfa weevil.

Obscure scale is heavily infesting pin oak at College Park. Dormant sprays to control scale insects should be applied immediately before buds open to oaks and other shade trees. Holly leaf miners are now pupating in their mines. Out of 20 infested leaves picked from a holly tree at College Park, 40% of the mines contained pupae.

Apple aphids are hatching on hawthorn at College Park and on apple in Montgomery County and infesting the opening leaves. Clover mites, although harmless, are entering houses and bothering homeowners in Montgomery County. Clover mites are best controlled by thoroughly spraying lawns, shrubbery and house foundations.

Here are some of the soil insect problems which do exist in Maryland: Wireworms in sweet potatoes and potatoes. These are not present every year but they are sometimes of enough importance to reduce the grade of the product. Corn is infested by wireworms, seed corn maggots, root aphids, but the problems are usually quite local. If corn is planted early, treat the seed to control maggots. Newly set tobacco often is bothered by wireworms, cutworms and stalk borer.—Theo. L. Bissell and Wallace C. Harding, Jr.

Alfalfa Aphid Hits Central Texas Crop

WACO, TEXAS—The alfalfa aphid has made the jump from New Mexico to Central Texas, and is now making itself at home in the lush alfalfa fields along the Brazos River.

First cuttings of alfalfa have been yielding from 600 to 700 lb. per acre, as compared with 2,000 lb. normally. Some fields farther east around Sherman have been plowed up, and will be planted to other crops.

As a result of the aphid invasion, no new fields are being planted in this area, and many old ones will likely be plowed up before another crop season.

Alfalfa Weevil and Other Pests Named in Delaware

NEWARK, DEL. — Alfalfa weevil adults are now active; the first new eggs were found near Bridgeville on April 2; hatching of overwintered eggs was then in progress at that point and, with higher temperatures, should become general.

Clover leaf weevil injury is common in many localities on red clover and alfalfa. Sweetclover weevil adults are emerging from hibernation in the Felton, Greenwood and Bridgeville areas.

Hatching of apple grain aphid is continuing; and about 30% of scab ascospores are ready for discharge during the first good rain.—L. A. Stearns and J. W. Heuberger.

Grasshoppers Expected in Eleven California Counties

SACRAMENTO — Eleven California counties may expect severe or very severe grasshopper damage this year, according to the Bureau of Entomology of the State Department of Agriculture.

The counties are Butte, Contra Costa, Humboldt, Kern, Mendocino, Nevada, Riverside, San Diego, Shasta, Tehama and Yuba.

Heavy damage to range and crops is possible throughout the season, the report said.

Greenbugs and Brown Mites Reported in Grain

WICHITA FALLS, TEXAS—Large numbers of greenbugs and brown mites have appeared within the past few weeks, threatening an otherwise promising wheat crop in this northwest Texas area. The current infestation is damaging wheat, legumes and barley, according to reports.

Crop observers said that danger would be greatly reduced if a good rain should come. The presence of ladybugs is expected to check the progress of greenbugs to some extent if warm weather continues.

Alfalfa Aphid Found in Numerous Kansas Sites

MANHATTAN, KANSAS—Alfalfa fields in ten counties of southeast Kansas were surveyed for spotted alfalfa aphid infestations. Moderate to severe destructive populations (counts as high as 2,000 aphids per sweep, 15-inch net) were found in several fields in Cherokee, Labette, and Montgomery counties. Other fields in these counties had light to moderate infestations that ranged from 200 to 800 per sweep.

Aphid populations were predominantly wingless adults and nymphs; however, numerous winged adults were also present. Even in fields where plants were only 2 inches tall a large amount of honeydew was present on the apparent stunted plant growth. In some fields, large areas of these injured plants was readily observed. Several hundred acres have been sprayed or are in the process of being sprayed, and a few acres have been flamed to gain control of these pests.

Light to moderate infestations were found in this area in the second tier: Crawford, Neosho, and Wilson counties, and non-economic counts were made in fields in the third tier: Bourbon, Allen, Woodson, and southern Linn counties. No winged specimens were found in Linn, Bourbon, Allen or Woodson counties. Lady beetles and larvae were nowhere abundant, however, lady beetle larvae were found in the southern counties indicating a buildup of these beneficial predators. No lacewing larvae were observed although a few adults were present. Few pea aphids were found in fields heavily infested with spotted alfalfa aphids.

Pea aphids were found in early all alfalfa fields that were examined in eleven southeast Kansas counties. Scattered infestations requiring control were found in Bourbon, Crawford, Cherokee, Labette, and Montgomery counties. Counts ranged from 20 to 1,500 aphids per sweep, 15-inch net. Very few spotted alfalfa aphids were found in those alfalfa fields heavily infested with pea aphids; it has not been determined whether or not this is coincidental.

Insecticidal control was being applied on a few fields in this area. Non-economic infestations were found in fields surveyed in Linn, Franklin, Woodson, Allen, Wilson and Neosho counties. Counts ranged from 5 to 40 per sweep, 15-inch net.

No spotted alfalfa aphids have been found or damage reported in Ness, Pawnee, Rush, Barton, Ellsworth, Saline, or Dickinson counties—Southwest central Kansas.

Moderate to severe populations of greenbugs were found in some barley and wheat fields of Cherokee, Labette, Montgomery, and Crawford counties, southeast Kansas. Scattered non-economic populations were found in nearly all wheat and barley fields that were surveyed in Bourbon, Crawford, Cherokee, Labette, Montgomery, Wilson, Neosho, and Allen counties.

The heavily infested fields contained areas of dead and/or injured plants that varied in size from three feet in diameter to include several acres. Fields of winter barley appeared the most heavily infested and were suffering greater loss of plants than wheat. Lady beetle populations, although still low, are slowly increasing. Parasitized aphids were observed in a few fields in Cherokee county.—David L. Matthew.

Entomologist Traps High-Flying Moths

BROWNSVILLE, TEXAS — Per A. Glick, an entomologist with the U.S. Department of Agriculture, has proved that pink bollworm moths migrate long distances by flying high in the air.

Mr. Glick takes his specially equipped airplane up nearly three miles high to trap the soaring insects. He used an aluminum wire trap which catches not only pink bollworm moths, but many other harmful insects.

This spring and summer he plans to use radioisotopes to mark the moths, then release them to find out the distance they migrate. Over a five-year period, Mr. Glick has made 1,[illegible] flights to capture 30,000 insects at altitudes varying from 20 feet up to 15,000.

Ranchers, Officials in Western Area Map 1956 Grasshopper Control Plans

DENVER—Federal and state personnel, college workers and ranchers have been holding meetings in the western states to map preliminary plans for 1956 grasshopper control work.

Everett Spackman, Wyoming state entomologist, reported that an estimated 304,500 acres would be sprayed in his state, including 149,200 acres of private land and 151,200 acres of federal land. He said that bids by aerial applicators were to be called in mid-April and the contract awarded about May 1.

Under the hopper control program, the landowners must supply one third of the money, the federal government will supply one third and the state government one third.

Mr. Spackman reminded ranchers interested in participating in the program that applications are to be made through their county agents. He said that the applications must be in the State Department of Agriculture by April 27.

Meanwhile, ranchers in the hopper infested areas of Colorado have been meeting with officials. The sign-up in that state is to be completed by May 15.

Colorado has an appropriation of $150,000 for grasshopper control work this year.

If there is complete rancher cooperation, it is proposed that 770,000 infested Colorado acres be treated with aldrin-diesel oil poison spray this year. This acreage is divided as follows:

Baca County: 76,200 in private and state lands; 23,800 on federal forest service lands.

Las Animas County: 580,000 in private and state lands; 20,000 on federal lands.

Otero County: 5,000 in private and state lands.

Dolores County: 15,000 in private and state lands; 10,000 in federal lands.

Archuleta County: 25,000 in private and state lands.

La Plata County: 5,000 in private and state lands.

Mineral County: 10,000 in federal lands.

WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

enn Pest

The Food & Agriculture Organi-ation of the United Nations, already osely identified with pest control n an international scale, is to step o its activities this year and in 57. Main targets for attack are e locust and the senn pest, the tter known scientifically as Eury-ster intergriceps.

Attention to the senn pest comes s a result of representations made Iran, Turkey, Iraq and other near astern countries. The insect mi-rates from its mountainous winter ideouts in the first warm days of ring and attacks cereal crops in e valleys.

Its method of operation is de-cribed by Dr. Clearhoe Logothetis, FAO entomologist, thus: "They in-ade the valleys and attack wheat nd barley. They climb to the head, tick their rostrums—mouthpieces n the form of a needle—into the rain itself and suck out the uices. Two or three insects per ead of wheat for about half an our are enough to destroy the rain completely. From the out-ide, the plant shows no sign of ttack. It appears perfectly well ormed, but when cut out, there is o grain inside."

For centuries eastern farmers have tacked the senn pest by hand-cking, but these crude measures e insufficient, according to Dr. gothetis. What is needed, he says, control by modern insecticides and raying techniques.

FAO is giving careful attention to e problem and it is hoped to find e right insecticide before the end this year.

orax Official Abroad

F. T. Winters, Jr., former man-er of the agricultural sales divi-on of the Pacific Coast Borax Co., vision of Borax Consolidated, Ltd., d now special advisor on herbi-des and plant foods to Borax Con-lidated, Ltd., of London, England, currently visiting Australia and ew Zealand.

Mr. Winters is traveling with B. L. inter, the British company's herbi-de representative for Australasia.

panish Fertilizers

The government of Spain is en-ged in an intensive drive to in-ease agricultural production and tilizers are playing an important rt. Domestic production has been pped-up to meet the country's owing needs.

The present annual consumption nitrogen fertilizers has been timated at 750,000 tons, com-ared with only 250,000 tons in 49-50. The upward trend is also own in the case of phosphates d potassium fertilizers with cur-nt annual offtakes set at 1,425,-0 tons and 110,000 tons respect-ely, against 800,000 tons and ,000 tons in 1949-50.

Farmers are being given aid in the m of subsidized fertilizers to en-rage them to make use of the ability.

sian Polar Crops

The Russians have established an cultural experimental station the Arctic Circle, and 24 va-s of vegetables are being culti-d although the growing season rt and temperatures generally low. This has been revealed by Soviet News Bulletin, a propaganda sheet published by Russian Embassies throughout the world.

The soil is poor; frosts occur even in August, the warmest month, and the period of vegetation lasts an average of 96 days, only half of which have a temperature of 50° or more. During even this short period temperatures fall below freezing at night, while the summers are dry and rain scanty.

How, then have the Russians performed the miracle? By the judicious use of fertilizers, they say. No details of applications have been revealed and there is no way of distinguishing propaganda from fact. But they claim to have been experimenting since 1932.

Jordan Potash

The Jordan government announces that the Egyptian government has agreed to participate in a joint Arab potash project involving an investment equivalent to $12,320,000. Iraq, Saudi Arabia and the Lebanon will participate, too. Shares in the new company will be offered for public subscription in the Arab countries, with the governments concerned covering any unsubscribed balance.

Construction is to start in the near future at the site of the old plant of Palestine Potash, Ltd., located at the northern end of the Dead Sea.

A Japanese trade mission recently visited Jordan and suggested Japanese participation in the project. Japan, it was said, would be prepared to buy large quantities of potash from Jordan. The Japanese have placed an order of 150,000 tons of potash, to be delivered during this year.

Latin American Growth

In Latin America, too, fertilizer usage is on the upswing. Hitherto, fertilizer consumption has been small. The domestic production of phosphate and potash fertilizers has more than doubled in the past 20 years, but despite this, imports are still required, and are likely to be required for some time to come.

The phosphate import requirement is assessed at 50% of the current annual usage while potash imports represent 75% of total needs.

The output of sulfuric acid is now closely approaching demand, reports say.

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William Bellano Named to Head Exploration By IMC

CHICAGO — William Bellano has been appointed to the newly created position of director, mining & minerals exploration, International Minerals & Chemical Corp., according to T. M. Ware, administrative vice president.

Mr. Bellano was production manager for International's phosphate chemicals division, where his principal responsibility was the management of the company's new Bonnie phosphate chemicals plant. Prior to that, he was manager of general engineering services for the central engineering division.

The creation of this new function will place increased emphasis on International's plans for the location and development of new ore deposits, on the development of existing ore bodies, and on the development of newer, low-cost mining methods, the company stated.

Mr. Bellano will make his headquarters at the corporation's general offices, 20 N. Wacker Drive, Chicago.

South Carolina Shipments

CLEMSON, S.C.—March fertilizer shipments in South Carolina totaled 286,994 tons, including 224,818 tons of mixed goods, according to the state Department of Fertilizer Inspection and Analysis. Shipments for the first nine months of this fiscal year (July-March) totaled 572,556 tons, a 12½% decrease from the 654,440 tons shipped in a corresponding period a year earlier.

NAMED TO BOARD

CLEVELAND — John A. Sargent, president of Diamond Alkali Co., has been elected a director of the White Motor Co., it was announced recently by Robert F. Black, chairman and president of White.

Insect Enemies of Alfalfa Aphid Sought

SACRAMENTO — The California Department of Agriculture has announced that the University of California is spearheading dissemination of insect enemies of the spotted alfalfa aphid in an effort to control this rapidly spreading pest.

Searches of the Mediterranean basin and the Middle East have produced such natural enemies as a ladybird beetle from Pakistan and tiny wasplike parasites from Europe and the Near East. Five greenhouses are under construction at Riverside, Cal., where these control insects will be propagated.

Another phase of the project involves distributiorf of a fungus that grows inside the spotted aphid and destroys it.

The Department of Agriculture estimates that the spotted alfalfa aphid has cost growers $13,000,000.

Jonathan C. Baker

Jonathan C. Baker New Traffic Manager For Summers, N. C. I.

BALTIMORE—Jonathan C. Ba formerly assistant traffic manage the Cooperative G.L.F. Excha Buffalo, N.Y., has been appoin general traffic manager of Summ Fertilizers Co. and Northern Ch ical Industries, according to an nouncement by James E. Totm president of both companies.

He will succeed John T. McD mott, formerly traffic manager at home office, Baltimore. Mr. McD mott becomes manager of office s of both companies at Baltimore.

H. Wakefield McGorrill, form traffic business agent with the Bos & Maine Railroad, becomes assist traffic manager.

Mr. Baker graduated from Rut University in 1939 and obtained master of science degree from University of Minnesota in 1940. a time, he was employed as rese assistant by the New Hamps Agricultural Experiment Station 1941, he went with the Coopera G.L.F. in Baltimore. He had years' army service with the Infantry Division, being separ from the army in 1946 as first tenant. He returned to the Coop tive G.L.F. and became assis traffic manager attached to the falo office.

As general traffic manager N.C.I. and Summers, Mr. Baker be responsible for the operatio N.C.I.'s fleet of 45 tank cars will service its new Searsport, M anhydrous ammonia and nitroge lutions facilities. He also will charge of a fleet of tank trucks t porting liquid alum, sulfuric nitric acid and petrochem throughout the Northeast area. tank barges are being planne service the Maritime Province

Mr. Baker will make his quarters in Baltimore.

Witco Executive in Government Post

NEW YORK—Appointment of Twombly, vice president of Chemical Co., as a consultant o ganic chemicals in the Chemica Rubber Division of the Busines Defense Services Administration partment of Commerce, was nounced recently.

Mr. Twombly has been acti the chemical industry for more 30 years. He served on the War duction Board as assistant dir of the Chemicals Bureau from to 1945, when he joined Witco sistant to the president.

During Mr. Twombly's temp service in Washington, his duti Witco will be assumed by Willi Walker, assistant director of tising and public relations.

Parathion's Power is Now available at new Levels of Plant Safety, Convenience and Economy!

Stauffer's "Flowable" Parathion 400* is a *water* emulsion . . . it eliminates the hazards of breathing dust . . . offers no possibility of phytotoxicity or off-flavors from inert or solvent residues. If spilled or splashed, it washes easily from skin or clothing . . . and it is harmless to any type of spraying equipment.

"Flowable" Parathion 400 is an exclusive Stauffer product, free of dust . . . free of oil or solvent . . . free of abrasive solids . . . it gives you all of Parathion's power and a minimum of its disadvantages.

STAUFFER'S "FLOWABLE" PARATHION 400 . . . may be substituted for any parathion spray or dust formulation at equivalent dosages, yet wetting is excellent and there is no residue to mar appearance.

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MORE BUSINESS TODAY

Pennsylvania Dealer Adjusts To Urbanization of Trade Area

Urbanization did not frighten William T. McCall's Sons, Chester, Pa., a farm supply dealer, out of business. Instead, the owners just surveyed the situation, remained right where they were and are doing more business today than they did when farming was at its peak in Chester County.

"Our firm is one of the oldest in the area, having been organized in 1878 by William McCall," says George Miller, firm associate, "and it has seen many changes during its lifetime. Feed and fertilizer were the products upon which this business was founded.

"When this area started becoming populated with industry, many of the farm dealers shook their heads, and closed shop. We didn't, primarily because we felt that the need for our supplies will always be required. It's just that we needed to readjust ourselves to current needs and follow out from there."

As home building and industry came into this Delaware Valley area, large farms gave way to the new trend. Livestock and poultry farmers moved out and large fields were divided into smaller ones. But one thing did remain, and that was the lawns and gardens surrounding individual homes, plants and factories as well as small vegetable and fruit crops.

"As a result, we have greater sales possibilities today than years ago," says Mr. Miller. "Instead of depending on a fistful of farmers for their fertilizer, insecticide and pesticide business, we have hundreds of customers. Naturally our feed business has suffered, but volume has been more than made up by sales of the supplies that we are currently promoting."

In readjusting their business operations to meet the territorial changes, here is what William T. McCall's Sons have done. First, they have modernized their establishment from a rundown farmer's warehouse to a modern showroom that is inviting to the public. Secondly, they have stocked a complete assortment of fertilizer and pesticides in the smallest quantities to bulk. Thirdly, they have established themselves as an advisory bureau for lawns, gardens, small vegetable and fruit crops with outside service, and finally, they haxe expanded their field of operation.

"The modern customer likes to shop for his needs and as a result, showroom business has become a constant one," Mr. Miller says.

Homeowners growing a great variety of grass, flowers and shrubbery all want special fertilizer. Those raising crops have their own needs in mind, so in order to cater to them, Mr. Miller stocks a wide selection of fertilizers and pesticides.

"Having these products in any size quantity that the customer wants, has been a great sales feature for us," says Mr. Miller. "Small sales always carry a higher profit margin. As a result, while quantity sales are decreased, profit margins have increased and taking in consideration the reduced handling that has been effected, we are profiting more today than in previous years."

A serviceman is dispatched to any customer who has reason for concern. This service is free and the serviceman may recommend a certain crop builder, an insecticide or fungicide as the situation may require. Added sales such as sprayers, dusters and related equipment culminate as a result of these visits.

"For the bulk business, we have gone further afield," says Mr. Miller. "Our salesmen now cover a greater territory and sell to farmers that have moved there. We always keep contact with the farmer that we serve and will usually call upon him if the distance isn't so great that it cuts into the profit on the fertilizer."

This dealer maintains year round contact with his farmers and larger fertilizer users by direct mail. Newspaper advertising features fertilizers, insecticides and related supplies. Brand names are played up and quantities suitable for the average lawn or plot are brought out. This stimulates showroom business.

"In many ways, we have main-

(Continued on page 16)

LARGE STOCKS—George Miller, Wm. T. McCall's Sons, Chester, Pa., right, is shown above making a sale to a customer. The firm maintains a large variety of pesticides and fertilizers in an assortment of package sizes.

SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

If you had the opportunity of redesigning your retail store, what changes would you make compared with your present layout? Would you want to change the store size, expand parking and loading facilities, add display windows and areas and rearrange all departments and lighting? Where would you put the office? How would you arrange the warehouse?

Two years ago, Harold Dobbs, manager of the Valverde Feed & Supply Co., Denver, was forced into the position of designing a new store after an explosion wrecked the old structure. Mr. Dobbs, who has 29 years of experience in selling farm supplies, had some pretty definite ideas about what the new retail store should include in the way of customer convenience. He made a list of every deficiency in the old store and sought to correct it in the new building.

Three major factors which Mr. Dobbs considered were maximum convenience for the customer, self-service and adequate parking facilities.

The new building which was planned is 42 by 82 ft. Along each side of the building are driveways leading to a parking lot which provides space for 20 vehicles. Even large truck-trailer combinations can load or unload directly at the warehouse entrance.

The retail store occupies the front one third of the building. The only partition in the building separates the retail portion from the warehouse. The retail store has two 10 by 8 ft. single-pane windows in the front, facing the street, and one each of the same size on the sides of the store. The interior of the store actually is on display to the public because of the large window areas.

Retail store departments are sharply separated by way of arrangement and fixtures.

The customer can tell at a glance where to look for insecticides, hardware, garden seeds and other supplies.

All prices are clearly marked on the merchandise to facilitate self-service shopping.

Mr. Dobbs' office is located in the center rear of the retail store and he can clearly see any section of the store to aid customers in finding and choosing merchandise. He likewise is close to the warehouse where he can assist customers in getting their orders filled.

An 18-ft. cut-in dock is 32 in. below the level of the warehouse floor which provides quick, truck-bed level loading and unloading in any weather.

"Our sales are substantially greater than before the explosion which indicates that our thinking has been along the proper lines," comments Mr. Dobbs.

Read the Label

It can be assumed that the effectiveness of insecticides, herbicides and other farm chemicals is often lessened because labels on the containers are not followed.

The labels contain information which manufacturers have developed, usually over extended periods of time through extensive research with the

(Continued on page 16)

New England News Notes

By GUY LIVINGSTON
Croplife Special Correspondent

New England governors, meeting in Boston recently, demanded action from the federal government on flood controls and flood insurance. The governors said they were "greatly disturbed that so little progress has been made toward flood control and insurance."

President Eisenhower's budget earmarked $17,000,000 for flood work in New England, but the governors had asked a minimum of $48,000,000. "We want a sound flood insurance bill, with the cooperation of insurance companies, if possible; but flood insurance with federal leadership in any case," they reported.

"We prefer a bill which would cover all natural disasters; but if this is not possible, we should have a flood insurance bill and further study of disaster insurance." Copies of the report were sent to the entire New England congressional delegation as well as chairmen of key congressional committees.

"We want action," they said. "Now is the time, not when another disaster is upon us."

Marketing Group

Dimon Lockwood of Boxford, Mass. has been elected president of the Essex County Cooperative Farming Assn. at the annual meeting held in Topsfield. Other officers elected were Edmund Bartlett of Salisbury, vice president; M. Charles Arthur of Ipswich, secretary, and Ralph M. Gaskill of Danvers, treasurer. Directors elected included George R. Barker, North Andover; Gardner P. Tipert, Danvers; J. Vernon Tarleton, Groveland, and Ralph S. Prescott of Georgetown.

Farm Bill

An unusual New England twist is in the current farm bill. It involves the 2,000 producers of cigar binder tobacco in the Connecticut Valley and their fight against new patented processes that provide an economic substitute for natural leaf tobacco.

The Connecticut Valley producers persuaded the Senate Agricultural Committee to write a provision into the farm bill whereby their binder crop will benefit from the soil bank

(Continued on page 16)

Doing Business With

Oscar & Pat

If there was one thing which Oscar Schoenfeld liked to do it was sleep. Usually he went to bed about ten o'clock each evening, and it was not long before he was asleep and snoring. Minnie, his angular nervous wife, didn't sleep so well nights. In fact, she always had to sleep with Oscar in the one double bed in the house, whereas many was the time she wished she could go to another room, close the door and shut out his snores.

But Oscar often said if you bought more than one bed, your relatives would always come and stay with you, longer than you wanted, eat your food and expect to be entertained a long time. And so, in this household, there was no extra bed. There was only a twenty year old davenport in the living room, and Oscar always said he would never allow anyone to sleep in his living room.

Now, a little past midnight, Minnie heard the telephone ring. Oscar was snoring and didn't hear it, and so Minnie got up and answered.

It was the police department, Officer Schwartz to be exact.

"Is Oscar there?" asked the officer. "Tell him there's trouble—down at the store."

Minnie began to shake nervously. She always did when trouble threatened. She shook Oscar and finally got him awake. "Oscar, Oscar. It's Officer Schwartz calling. There's some trouble down at the store."

Oscar sat up, rubbed his sleepy eyes, scratched his head and rubbed his protruding tummy. He would have gone to sleep again, sitting up, had not Minnie shook him again.

Finally he staggered to the phone and muttered a thick "hello" into the receiver.

"Huh? What's that?" he finally shouted. "Nein. Ach du lieber Gott! Some truck with iron girders hit a car of fertilizer just as they were switchin' it onto our side track? It's spilled all over the switches and onto the driveway? What's the matter with the railroad? Ach, careless, careless, careless. Yes, yes, I will be down as quick as I can. Have to find my pants first."

Oscar snapped the received back on the hook. "Minnie, where are my pants—and my shoes, too? Somebody hit a car of superphosphate and cracked it wide open. All our fertilizer is pouring into the street and stopped traffic."

"Oh, oh," wailed Minnie. "It always happen to us—the worst."

"That Pat," growled Oscar trying to get his chubby legs into his pants and almost tripping. "Always something happens when he goes away. This time his aunt's funeral in Indiana. He couldn't leave tomorrow morning—he had to go after supper last night."

There was no time for hot coffee or anything like that. Oscar just shoved a piece of apple kuchen in his mouth, another in his coat pocket and then got out his old car and drove down to the farm and fertilizer store.

It was chilly and rainy, and Oscar cussed everybody connected with the railroad and all the "stupid" truck drivers who didn't watch where they were going, and he also bewailed the gods of bad luck for hounding him all these years, and worst of all giving him a partner, a good for nothing troublemaker such as Pat McGillicuddy.

Down at the fertilizer store, he saw that there was quite a mess. The truck had been pulled away, but the broken fertilizer car had been pushed nearer the fertilizer firm's buildings, where streams of superphosphate still trickled to the ground.

But on the railroad crossing, and over the nearby switches and rails there lay two and four foot high piles of fertilizer. It had spewed out of the bulk car when the truck bashed in its side.

"Gosh," said a railroad brakeman as he finished shoveling the fertilizer from a switch. "This stuff is sticky when it's wet. It plugs up the switches."

"Well, Oscar, you had better get this stuff off the railroad tracks," Officer Schwartz commanded, "and the highway, too. We shoveled some away so the traffic could get through."

"I will not," snorted Oscar. "We don't have to pay for it. The railroad does. Ach, what a waste of fertilizer."

The train had unswitched the broken railroad car and was now pushing it farther toward the fertilizer loading dock. The jerking of the train caused about eight more tons to slide out on the Schoenfeld & McGillicuddy parking lot. "Stop, stop!" yelled Oscar. "You are wasting fertilizer—for somebody."

The trainmen gave it up as a bad job, unhooked the coupling and went off.

Oscar went into the fertilizer store and telephoned his insurance agent. The sleepy man answered the phone after a few minutes, listened patiently, then said, "Call the railroad agent. He'll send a claims man down to look at the car."

Oscar did that, and the railroad agent said something which sounded like swearing, and Oscar gave him a dressing down for not attending to customers' trouble promptly.

A few seconds after Oscar hung up, the telephone rang. It was Nora McGillicuddy. "Just a minute, Oscar, Pat wants to talk to you. We are in Kentland, Ind."

Then Pat was on the wire. "Oscar, the phone operator got us in Indiana. How bad is the accident?"

"Why is it," Oscar said crossly, "that whenever you go out of town all this happens? They have spilled fertilizer all over the parking lot and the railroad tracks, tons of it. Ach, they waste it just like you waste our money on advertising and sales promotions."

Pat was silent for a moment. Then he said excitedly. "Oscar! Rush over to the radio station and put a spot announcement on the air. Tell the station man you want an ad which invites farmers to come down and scrape up free all that superphosphate that fell on our parking lot.

"But don't let them touch any tha is in the car. What's on the groun is ours to dispose of, so trucks ca get into our lot for the normal cours of business."

Oscar bit his lip. Leave it to Pa to think fast, to cash in advertising wise on such trouble.

"Oscar, did you hear that?" Pa repeated. "Invite farmers to com and pick up the free fertilizer on th ground. The railroad will have t pay for the stuff that's on ou ground. If I know farmers they' come running early in the morning Get some good displays on the loa ing platform. You'll sell extra stuff— and early."

"I don't know if I will or not," Oscar said sharply. "This business i starting to make me sick." And h hung up on Pat.

For a moment he sat in his cha thinking hard. Why couldn't he ge these sales promotion ideas like Pa did, especially since he was right o the scene, and Pat wasn't?

"But maybe it's because I'm dif ferent," he consoled himself. "I wan to save money, not throw it away."

He shoved his hand in his pocke felt the apple kuchen. A cheerin thought struck him. He would go t Happy's Coffee Cup down the stree get some coffee and eat his kuche there. That would give him time t think, to decide if he would do a Pat wanted him to—advertise fre fertilizer that had been spilled o the premises.

"This fertilizer business," he mut tered as he walked down the dim lighted street toward Happy's. "It getting worse all the time. The onl reason I stick to it is because of th money. Ach, it's nice to think of a the money Minnie and I got save Some day, though—"

RECEIVES A TON—Stanley Pieczarka, Jr., center, national winner of the National Junior Vegetable Growers production and marketing contest, received a ton of Ammo-Phos high analysis fertilizer at his home in Agawam, Mass., for his achievement. He is congratulated by Dr. Joseph D. Campbell, agronomist with Olin Mathieson Chemical Corp., which provided the award, and Dr. Grant B. Snyder of the University of Massachusetts, NJVGA adult adviser. Stanley will enter Purdue University this fall to work for his doctor's degree in horticulture, paying a part of his way with the profits from his corn and tomato crops.

OVER THE COUNTER

(Continued from page 9)

products which they pertain t Manufacturers spend thousands dollars putting these labels on th containers.

Dealers ought to point out t each customer that the farm chem ical sold must be used as recom mended and all precautions fol lowed to obtain best results.

At a recent agricultural dealer meeting in Illinois, Dr. Fred Slif extension specialist from the Un versity of Illinois, said that one the surest ways to obtain unsati factory results is to ignore dire tions outlined on the container lab

Citing Canada thistle spraying a specific example, Dr. Slife sa that many times people will doub the rate of 2,4-D for thistle spra ing because then they can see th thistles fold up in a day or tw However, before long they will fi the thistles back in action again b cause all they did was top-kill the By following the recommended ra the thistles will not be top-killed b will absorb the material and a pe manent kill will result.

Dr. Slife recommended that an one using chemical sprays shou follow the rate specified and be su that the sprayer they are using delivering the volume of mater necessary for the job.

COOPERATIVE BOUGHT

MT. PLEASANT, IOWA — T Henry County Supply Cooperat has purchased the Fairfield Coope tive Supply. In addition to petrole products, the Fairfield branch handle a complete line of feeds fertilizers.

Successful Farming
$. 25 cents
Sure I had weed problems like this,
but Black Leaf had the solution!
Diamond Black Leaf
COMPANY
CLEVELAND
Black Leaf
2,4-D
AMINE WEED KILLER
(Contains 4 Pounds 2,4-D Acid Equivalent per Gallon)
GALLONS NET
ACTIVE INGREDIENTS:
Dimethylamine Salts of
2,4-Dichlorophenoxyacetic Acid* 49.6%
INERT INGREDIENTS 50.4%
*2,4-Dichlorophenoxyacetic Acid equivalent 41.2%
Licensed under U. S. Pats. No. 2,394,916; 2,390,941; 2,396,513; 2,412,510; 2,472,347; Re. 23,115 and 2,453,983
DIAMOND BLACK LEAF COMPANY
CLEVELAND 14, OHIO, U. S. A.
Form D-0186
Printed in U. S. A.

BLACK LEAF WEED KILLER ADS
BOOST YOUR PROFIT HARVEST!

This spring DIAMOND BLACK LEAF sows its biggest weed killer ad campaign. You'll reap the profits in extra sales and new customers!

We're planting this thought in farmers' minds . . . DIAMOND BLACK LEAF is the powerfully advertised and merchandised brand name of the world's finest weed killing chemicals.

The dealer pictured here has spotted our lead-off ad. It's in *four colors*—on *Successful Farming's back cover* in May. Advertising like this builds business for you!

More big weed killer ads will appear in eight other farm publications in May.

What about merchandising support? Here's a free, volume-boosting trio . . .

Weed Killer Selector Wall Chart. Everything you—and your customers—need to know about weed killers and how to use them. 18 x 24 inches.

Handy Pocket Folder. All the details on Black Leaf Weed Killers. Chart is reproduced in smaller size. Excellent customer giveaway.

Self-Selling Counter Display Carton. Holds six one-gallon cans. Puts 'em in front of the people who need 'em. Eye-catching colors—green, red and black—match the chart.

Ask your DIAMOND BLACK LEAF salesman for these charts, folders, cartons. Order now for the weed killer buying push. Or write to the DIAMOND BLACK LEAF sales office nearest you.

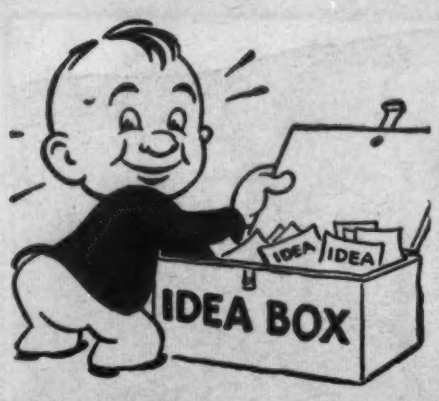
Eastern Sales Office
P. O. Box 1476
Lancaster, Pennsylvania

Western Sales Office
P. O. Box 817
San Jose, California

Southern Sales Office
P. O. Box 1227
Montgomery, Alabama

Midwest Sales Office
3525 Vandalia Avenue
Des Moines, Iowa

Black Leaf **Diamond Black Leaf** COMPANY CLEVELAND 14, OHIO



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6404—Nitrogen

"Your Best Nitrogen Buy?" is the title of a new folder recently produced by the Spencer Chemical Co. Subject of the folder is the company's ammonium nitrate fertilizer with an analysis of 33.5%. Seven reasons outlined in the folder for using this product are: (1) No expensive application machinery is needed, (2) it can be applied when desired, (3) there is no storage problem, (4) it spreads uniformly, (5) it eliminates nitrogen loss, (6) it is flexible in application and (7) it contains both nitrate and ammonia forms of nitrogen. To secure the folder check No. 6404 on the coupon and mail it to Croplife.

No. 6399—Equipment Line

New literature is available on the Pollard Manufacturing Company's line of fertilizer applicating equipment. The firm manufactures six different types of applicators consisting of one trailer type, three rear mounted types and two saddle tank types. Also offered is a 4-wheel wagon manufactured especially for a 1,000-gal. nurse tank. Among features of the equipment are a rotating tool bar, saddle tank and safety gauge depth wheels. Readers who are interested are asked to inform the company whether they are dealers or distributors. For more complete details check No. 6399 on the coupon and drop it in the mail.

No. 6401—Batch Mixer

A dry fertilizer batch mixer that is claimed to be easily set up as a complete fertilizer plant to deliver seven tons of pulverized and completely mixed fertilizer per hour, is announced by the Andrews Machine Co. The mixer is delivered in one unit, all that's needed being wiring to the motors. The machine is built of heavy gauge steel and has all welded construction. Two 7½ h.p. motors drive the vertical screw and mixer, which is described as having heavy duty bearings and large diameter shafts. The hammers in the bottom of the hopper are designed to break up any lumps. In addition to dry fertilizer, the Andrews mixer can be used to mix many other types of dry material, company officials state. For more complete details check No. 6401 on the coupon and mail it to Croplife.

No. 6400—Seed Corn Movie

"More From Every Acre," a 16 mm. color and sound movie produced by Northrup King & Co., is now available for showing. The 23-min. movie tells the story of how a farmer, using hybrid seed and good farming practices, can get greater yields of higher quality corn. Hybrid corn seed processing, fertilizing and production methods, along with the research and breeding work done by the company, are shown, telling how a farmer benefits from commercially produced seed. Further information can be secured by checking No. 6400 on the coupon and dropping it in the mail to Croplife.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6395—Phytotoxicity Bulletin

"Phytotoxicity of Solvents and Emulsifiers Used in Insecticidal Formulations" is the title of a bulletin prepared by R. T. Gast and J. D. Early for presentation at the recent North Carolina Pesticide School at Raleigh. According to Minerals and Chemical Corporation of America the information it contains "should be of interest to formulators of granular DDT for corn borer control." A company spokesman said that "this work was not directed toward finding a suitable solvent for DDT in granular formulations, but perhaps it will be valuable to chemists and formulators in their search for a suitable solvent." The bulletin may be secured by checking No. 6395 on the coupon and dropping it in the mail.

No. 6397—Couplers

Die-cast aluminum demountable couplers for irrigation pipe with new design features are available from the Olin Mathieson Chemical Corp. Providing the same twist-locking feature of the coupler introduced in 1948, the die-cast unit is a simple two-piece construction, assembled with four bolts and nuts. A continuous one-piece rubber gasket with a faultless seal for both low and high pressure systems is used. The gasket is a water-tight interlining and is sand-proof. Protection against grass and mud is provided by the coupler's streamlined wider foot, which also guides the tubing, the company announcement states. It is available in sizes 2 through 8-in., with or without a riser outlet. Secure more complete details by checking No. 6397 on the coupon and mailing it.

No. 6390—Pest Control Bochure

The Diamond Black Leaf Co. has issued a brochure covering its line of pest-control products for lawn and garden care. The eight-page catalog features two new aerosol sprays for household pest control—fly and insect spray and PFFT house and garden insect spray; two improved garden insecticides — activated 40 garden spray, and black leaf rose and flower dust; and two lawn care products—lawn weed killer and lawn insect control. Fifteen other products are also described and illustrated. Supplementary information includes a review of dealer advertising and sales promotion helps and complete price schedules. Copies of the booklet are available by checking No. 6390 on the coupon and mailing it to Croplife.

No. 6396—Metering Pump

A solutions metering pump designed specifically for application of liquid fertilizer solutions by subsurface injection or for spraying on top of the soil has been developed and is being marketed by the Dempster Mill Mfg. Co. The new pump, model S, is a companion to the Liquijector anhydrous ammonia applicator pump produced by the company last year. It can be used with the firm's model S (solutions) Liquijector or similar type applicator. Simplicity in setting and operation is claimed to be a feature of the new pump in addition to its positive double-acting piston. On a Dempster applicator, the pump is said to deliver accurately within a range of from 6 to 75 gal. of liquid solutions per acre, on a swath from 80 in. to 280 in. Secure more complete details by checking No. 6396 on the coupon and mailing it to Croplife.

No. 6388—Grassland Film

The story of grassland farming for dairy and beef farmers is told in a new full-color, sound-slide film released by General Chemical Division, Allied Chemical & Dye Corp. The company states that "the 45-minute film gives the latest authoritative information on profitable practices in modern pasture management. Particular emphasis is placed on the new methods of fertilizing, insect and weed control, harvesting, and silage preservation that are contributing to the boom in grassland farming." Entitled "Green Pastures," the film was produced as an educational service by General Chemical and is available for showings to farm audiences by persons or groups active in agricultural education work. Check No. 6388 on the coupon and mail it for information about securing the film.

No. 6392—Soil Moisture Meter

A new model of the Irrigage meter for measuring soil moisture has been announced by the Rayturn Corp. The new model 202 incorporates a built-in selector switch, a feature which permits soil moisture observations at four different depths through a single outlet. The unit is designed for use with either of the company's two-foot tapered "Gage-Stake" or individual "Gage-Plugs." By "plugging in" the portable meter to stakes

Send me information on the items marked:

- ☐ No. 5415—Movie
- ☐ No. 6388—Grassland Film
- ☐ No. 6389—2,4-D Folder
- ☐ No. 6390—Pest Brochure
- ☐ No. 6391—Weed Control Guide
- ☐ No. 6392—Soil Moisture Meter
- ☐ No. 6393—Literature
- ☐ No. 6394—Cotton Defoliant
- ☐ No. 6395—Bulletin
- ☐ No. 6396—Metering Pump
- ☐ No. 6397—Couplers
- ☐ No. 6398—Storage
- ☐ No. 6399—Equipment
- ☐ No. 6404—Nitrogen
- ☐ No. 6400—Movie
- ☐ No. 6401—Batch Mixer

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife
P. O. Box 67,
Reader Service Dept. Minneapolis 1, Minn.

plugs buried in the root zone, the grower determines the soil moisture content to the best irrigation procedure. Check No. 6392 on the coupon and mail it to Croplife to secure more complete details.

No. 6389—2,4-D Folder

The Stauffer Chemical Co. has prepared a folder on the use of its 2,4-D products for weed control in crops. Listed are control recommendations for weeds in corn, sorghum, wheat, oats, barley, lawns, turf, pasture and flax. The table provided in the folder is based on the latest information available for the north central states area, the company states. Listed also are annual and perennial weeds that need one treatment and those that usually require more than one treatment. Dosages required are included. The folder may be secured without charge by checking No. 6389 on the coupon and dropping it in the mail.

No. 6394—Cotton Defoliant

A product called by the trade name, Shed-A-Leaf "D", a cotton defoliant for dust application, has been announced by Chipman Chemical Company, Inc. The new product will be available in the cotton states east of and including Texas. The product is a white dust and applied by either airplane or ground dusters. It is said to be non-irritating to people handling and using it, is non-poisonous and does not corrode equipment. For further information check No. 6394 on the coupon and mail it to Croplife.

No. 5415—Grain Sanitation Movie

Reservation dates are being accepted for showing of the film, "The Hungry Horde," produced by Douglas Chemical Co. The 18-min. film is in color and tells how the company's product, known by the trade name, Tetrakote, is utilized in a grain sanitation program. To secure more complete details check No. 5415 on the coupon and drop it in the mail.

No. 6398—Phosphoric Acid Storage

New vertical storage tanks in which fertilizer manufacturers can store phosphoric acid and other non-pressure corrosive liquids were recently introduced by the Butler Manufacturing Co. The tanks feature liners called by the trade name, Flexi-Liners, which are air tested before shipment. Each tank is designed for the liner's easy installation and complete protection, it is claimed. Contents of 75% phosphoric acid, 80% sulphuric acid, and other types of non-pressure corrosive liquids have been stored successfully in many plants throughout the country, it is said. Information and recommendations regarding storage problems for all types of corrosive liquids will be furnished upon request. Called FXL units, this equipment is available in several sizes, including 11 ft. by 12 ft.-8,600 gal. and 11 ft. by 17 ft.-12,000 gal. capacities. However, many other capacities to suit specific needs are also available upon request. Each tank is fabricated entirely of hot rolled steel and two outlets are furnished in any combination of 2 in., 3 in. and 4 in. sizes. Secure more complete details by checking No. 6398 on the coupon and mailing it.

No. 6391—Weed Control Guide

The 1956 edition of the GLF Chemical Weed Control Guide has been released by the GLF Soil Building Service, division of the Cooperative GLF Exchange, Inc. The 62-page guide contains a list of "watch" words of weed control, and weed control recommendations for the dairyman, vegetable grower, lawn caretaker, fruit grower and diversified farming operators. Chemicals recommended to the control job are listed. A copy of the guide is available without charge by checking No. 6391 on the coupon and mailing it to Croplife.

No. 6393—Molybdenum Literature

A new listing, with brief descriptions, of all its available chemical bulletins, has been issued by Climax Molybdenum Co. Designated Ch-3, this four-page compilation may be obtained on request. Attached to the list is an easy-to-fill-out blank for ordering desired bulletins. The company's available literature is listed in the following categories: 1. Chemical data series: This group of 13 bulletins gives comprehensive data on the physical and chemical properties of molybdenum compounds. 2. Agriculture: Fourteen publications cover research and commercial developments involving the use of molybdenum compounds in agriculture. 3. Analysis: Three bulletins review methods of analyzing for molybdenum in the chemical, metallurgical and agricultural fields. 4. Ceramics. 5. Catalysts. 6. Colors. Secure the listing by checking No. 6393 on the coupon and dropping it in the mail.

GRUB CONTROL

GENEVA, N.Y.—DDT, dieldrin and chlordane have all proved effective in checking injury to lawns by grubs of the European chafer, according to Dr. Foster L. Gambrell, Cornell entomologist at the New York Experiment Station here.

AMINOTRIAZOLE

Another "First" for American Chemical Paint Company

...one more in a long list of ACP-pioneered chemicals

Since 1944—when *selective* chemical control of weeds in lawn and crops really began—practically every new development in weed and brush killers has come out of ACP laboratories, the result of ACP research. Our registered name Weedone is perhaps the most famous single name in the whole field of chemical weed control—used the world over.

Beyond this, to name but a few, we were first to give you 2,4-D weed killer, first with 2,4,5-T brush killer, first with a low-volatile combination of 2,4-D and 2,4,5-T for use on brush, first with a low-volatile killer containing 2,4-D and 2,4,5-T for lawns.

***NOW...** with aminotriazole, which we developed, adapted and have patented, we give you two great new chemical servants on which ACP also owns the patents. These are*

WEEDAZOL*

This is the great new herbicide discovery you've been reading about. It is an aminotriazole herbicide with a proved kill on tough problem weeds such as Canada thistle, cattail and tules, and poison ivy. Doesn't sterilize the soil.

*Trade-Mark

meeno contains **AMIZOL** (aminotriazole)

This is the unique new cotton defoliant, already widely proved on thousands of acres—and *the* cotton defoliant that *retards second growth.*

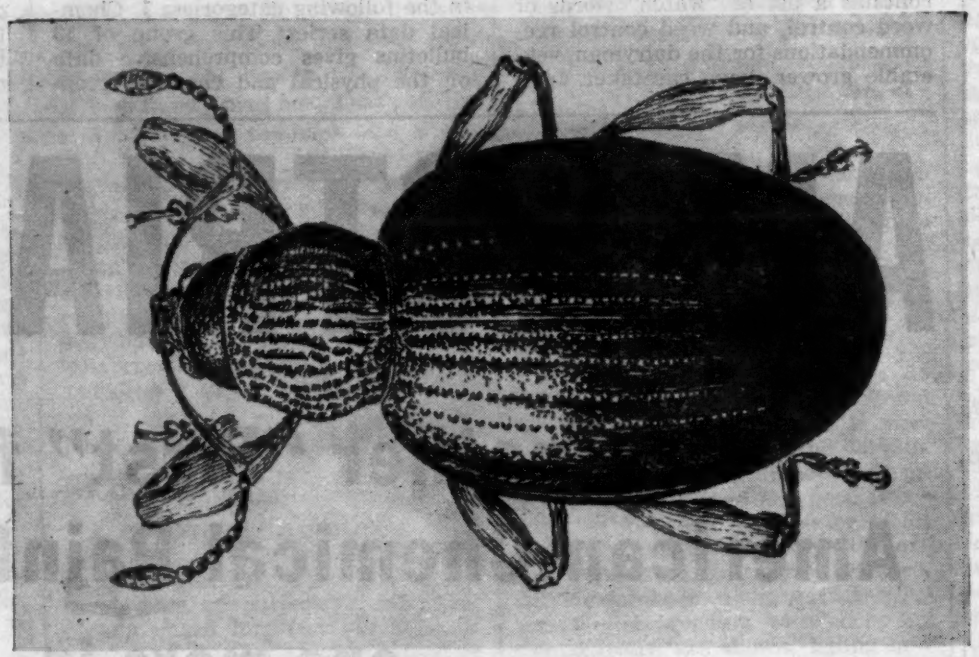
For complete information, see your dealer or write us for bulletins

AMERICAN CHEMICAL PAINT COMPANY Ambler, Pa. • Niles, Calif.
Agricultural Chemicals Division

WEEDONE ACP WEEDONE

BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



Strawberry Weevil

How to Identify

The adult weevil, illustrated above, is described as being reddish-brown in color, measuring from 1/12 inch to 1/8 inch in length. Young grubs of the species are soft-bodied, white and legless. They remain in this stage for about 4 weeks before entering the pupal stage.

Habits of the Strawberry Weevil

Adults are active during the early part of the summer, feeding until about mid-summer, then going into hibernation, sheltered under trash, where they remain for the rest of the summer, fall and winter months. Emergence from this stage is in the spring. The female weevil makes a puncture in the strawberry bud and inserts an egg. The young grubs that hatch within the bud feed on it and stay on through their pupal stage, emerging as adults.

Damage Done by Weevil

As indicated above, the strawberry buds are killed through the egg-laying of the adult beetle and the feeding of the young within the bud. Infested strawberry plants are characterized by killed buds and fruit hanging on partly-severed stems. In addition to strawberries, the pest attacks wild blackberry, raspberries, and dewberries. Its distribution is in the eastern part of the U.S.

Control of Strawberry Weevil

A number of insecticides, both old and new have been recommended in various states for control of this pest. In view of the possibility of residues remaining on the berries, extra caution should be taken in applying any toxicant. State experiment station entomologists and county agents should be consulted for local recommendations for this year.

Illustration of Strawberry Weevil furnished Croplife through the courtesy of the U.S. Department of Agriculture.

Previous "Bug of the Week" features have been reprinted in attractive 24-page booklet, priced at 25¢ single copies; reduced rates in quantities. Write Croplife Reprint Dept., Box 67, Minneapolis 1, Minn.

FARM SERVICE DATA
Extension Station Reports

The woolly apple aphid which has ong rated a major pest is again laguing nurserymen and fruit grow- rs, according to the New York Ex- eriment Station. "The insect is of articular concern to nurserymen," ays Dr. Foster L. Gambrell, station ntomologist. "The extent of damage o orchards cannot be easily evalu- ted, but the pest is of definite con- ern to some fruit growers."

Woolly aphid-injured nursery trees nd rootstocks are of no commercial alue and must be discarded, ex- lains Dr. Gambrell. The malling root- tocks now used extensively as size- ontrolling stocks for apples for both ome and commercial plantings are specially susceptible to attack, he ays. Commercial varieties growing n standard seedling stocks also often eveal heavy infestations at digging ime.

Station tests show that trees sprayed every two weeks beginning late in May or early June and continuing until August 1st can be kept reasonably free from woolly aphids. Malling rootstock propagating beds receiving one thorough heavy spraying of tops and soil around the base of the plants during June should be protected against root injury.

Use of parathion, malathion and icotine for other pests in commercial rchards has kept woolly aphid more r less under control. If heavy in- estations continue to develop, how- ver, special control measures may be ecessary, says Dr. Gambrell.

★

A foliar analysis study of 208 leaf amples from 40 different Connecti- ut apple orchards indicates that the eneral condition of the test or- hards was satisfactory for nitrogen nd phosphorus, according to the University of Connecticut College of Agriculture.

Approximately 25% of the orchards were low in potassium, while about he same number were above the esired range in this element. Almost alf the orchards tested were low n magnesium, while more than half were low in calcium. Soil pH in 87% f the orchards was below desirable.

The satisfactory nutritional condi- ion of nitrogen and phosphorus like- y is due to the fertilizer programs ollowed by the growers, according o the college.

★

Nine of the high-placing farms in ast year's Delaware Greener Pas- ures contest have started a special eries of high-yield fertilizer tests, eports William Mitchell, University f Delaware agronomist.

On each farm, the owner, with he help of Mr. Mitchell, and George ipas of Dover, and William Hender- on of Georgetown, county extension gents, has fenced off a 40-by-60- oot pasture area. In each of these closures, plots have been laid out o the owner can try six different rtilizer treatments and compare re- ults.

The idea, says Mr. Mitchell, is to xperiment on a farm-by-farm basis ith some of the fertilizer recom- endations that have given very high rass yields at the college research tation at Newark.

Farms and farmers taking part in e experiments are Allison Davis, Greenwood; Delaware State College at Dover; Stanley Stachecki, Dover; Pat Caulk, Woodside; Merill Jones, Felton; Victor Rust, Rehoboth; Robert Short, Ellendale; Charles Blendt, Smyrna, and Charles Ewing, Smyrna.

★

Sales of farm products in 1955 brought home 6% fewer dollars than in 1954 for West Virginia farmers. For the entire country, the drop averaged 3%. This showed 11 states with even greater declines than were registered in West Virginia, Kenneth P. Brundage, extension specialist in farm management at West Virginia University, has noted.

"When this trend is coupled with the realized net farm income per farm, as reported in 1954, it shows many farmers hard-pressed," Mr. Brundage commented. "The 1954 income per farm in West Virginia was reported as $941, as compared to a national average of $2,316. This rated West Virginia farms as having fewer dollars than those of any other state. Improvements will be needed in the years ahead."

In looking at steps that might improve farm conditions, several opportunities are available to West Virginia farmers, Mr. Brundage believes.

"Expanded volume of production is needed on many farms to increase income," he explained.

"Poultry and dairy activities provide regular monthly income in areas where markets are available. We know that the number of farms is declining so that the 'pie' of farm sales is cut into fewer pieces each year. Eventually a smaller number of farms will be operated. These farms of the future will be large enough to operate efficiently under modern conditions and provide a reasonable profit to their owners."

ALFALFA ACREAGE

MORGANTOWN, W. VA.—Alfalfa acreage on West Virginia farms reached nearly 100,000 acres in 1955, and produced hay or pasture estimated to be worth five million dollars.

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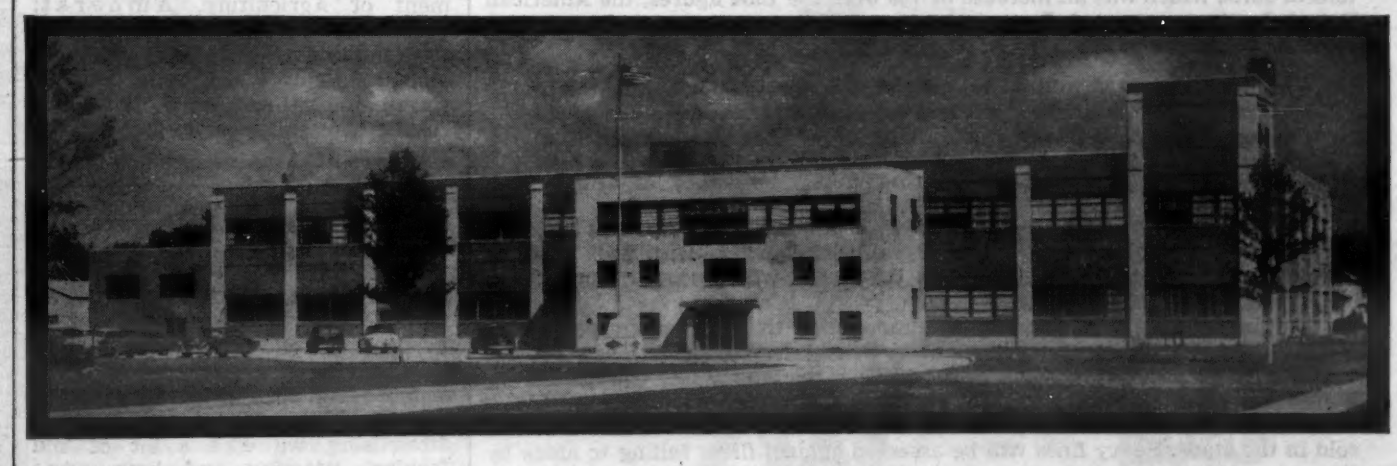

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What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

U.S. Pesticide exports in 1955 totaled 328,131,000 lb.; valued at $79,133,000, the Business & Defense Services Administration of the U.S. Department of Commerce reported. These totals were considerably higher than those of 1954, to set a new yearly record.

The high survival of boll weevils in Louisiana indicated the possibility of an abundance of this pest during the coming season, if conditions are right for their development. An average of 3,654 live weevils per acre were found in Madison parish. This figure was 4.3 times the average number found during the past 20 years, and 1.7 times the previous record set in 1950.

Experts in the fertilizer field held differing views regarding the sales possibilities for the 1956 growing season. One group was described as being optimistic, the other much less so. Fear was expressed that the delay in passing farm legislation in Washington, would slow sales at the present time, only to create an unusually heavy demand later.

Davison Chemical Co., Division of W. R. Grace Co., Baltimore, announced the installation of new facilities at its Curtis Bay Works for production of granular fertilizer materials. The new unit cost $400,000. . . . Donald F. Starr was named by Trinidad Ryania Corp. as its representative in the U.S. His headquarters are at Upper Montclair, N.J.

A reduction in the number of acres being planted for the 1956 crop year was reported by USDA. According to its figures for the 16 major crops listed, the reduction in 1956 will amount to some 3.4 million acres as compared to last year.

Over 2.2 million acres of timber were treated with pesticidal chemicals during 1955, the U.S. Department of Agriculture reported. In addition, some 450,000 trees were sprayed individually to control bark beetles. Efforts to control the spruce budworm accounted for spraying of 2,262,700 acres of a total of 2,274,300 acres.

A $20 million lawsuit against Dr. Selman A. Waksman and Rutgers University over royalties on the antibiotic streptomycin was dismissed by a New Jersey Federal judge. . . . Richard D. Tayloe was named director of technical services for National Potash company, New York. In his new position, he helps fertilizer manufacturers with various problems.

Robert R. Heck was named by Southern Nitrogen Co., Savannah, Ga., as technical service representative in the company's southern area. . . . Production of anhydrous ammonia in the U.S. during 1955 totaled 3,163,041 tons, compared with 2,719,660 tons the previous year, the U.S. Department of Commerce reported. Significant gains were also registered in ammonium nitrate, ammonium sulfate, phosphoric acid, and nitric acid.

North American deliveries of potash during 1955 amounted to 3,744,143 tons of salts, which was an increase of 7% over the 1954 figures, the American Potash Institute reported. Imports increased 35% over those of the previous year, API said.

More than 155 million bushels of corn grown for grain, worth more than $182 million, were lost because of European corn borer damage in 1955, USDA estimated. Although this loss amounted to approximately 5% of the total crop, it was still less than the estimated 7% loss experienced in 1954.

Plans for the erection of a large pyrethrum-extraction plant at Nakuru, Africa, were announced by African Pyrethrum Development, Inc., in New York. The facility, to be the largest in the world, will process from 2,500 to 3,000 tons of flowers annually.

California Spray-Chemical Corp. announced that it would soon begin construction of its new pesticide plant in Southern France. The new project will cost some $1,500,000 . . . A new fertilizer regulatory law was passed by the Pennsylvania state legislature, which will require registration with the state of every grade and brand of commercial fertilizer and fertilizer material sold in the state. Heavy fines will be assessed against firms failing to abide by the new regulations.

American Cyanamid Co. announced that its new systemic insecticide, Thimet, will be available in two states (Mississippi and Texas) during the coming season. The material was recently granted acceptance by the U.S. Department of Agriculture.

Speakers at the annual spring meeting of the National Agricultural Chemicals Assn. at Hollywood, Fla. covered merchandising, public relations, creation of new markets and an industry-wide "read the label" campaign. The meeting was held March 14-16.

Petroleum Chemicals, Inc., jointly owned by Continental Oil Co. and Cities Service Oil Co., announced plans to build a $12.5 million nitrogen plant at Lake Charles, La. It will produce 100,000 tons of ammonia annually.

Delay in bringing into effect the provisions of the "Soil Bank" was feared to mean it will not be effective in time for use during the 1956 season. Filibustering by legislators favoring high price supports was reported to be hampering the passing of the bill.

Stauffer Chemical Co. and West End Chemical Co. announced a proposed merger of the two firms, in San Francisco . . . . Robert U. Haslanger was elected vice president of Escambia Bay Chemical Corp. . . . . The California Fertilizer Assn. announced that its annual convention would be held Nov. 11-13 at the Hotel Del Coronado, Coronado, Cal.

J. C. Gaines, Texas A&M College, was named chairman of the Southwestern Branch, Entomological Society of America, at the group's annual meeting at Ft. Worth, Texas, Feb. 20-21. Dr. Gaines succeeds D. C. Earley, Los Fresnos, Texas.

NEWS NOTES

(Continued from page 9)

program. The latter is aimed at taking acreage out of production in an effort to reduce agricultural surpluses.

New England tobacco growers would get $100 an acre not to plant this year, or roughly $300,000 if all of them took part in the program. Growers here face an uncertain future market, with the development of manufactured tobacco leaf.

They would prefer to get the soil bank payment, instead of producing for government storage, to ease a transition period in which they will try to develop new methods and investigate various ways of maintaining an income off the soil.

Snowstorms

Four big snowstorms in two weeks in the last half of March left 41 inches of snow in eastern, central and southern Massachusetts and Rhode Island and parts of Connecticut. Snow removal was difficult in farm areas and it was expected the late snowfalls would delay the spring planting season.

Conservation Judges

Judges to select the outstanding soil conservation district and the champion farmer-conservationist for the tri-state area comprised of Connecticut, Massachusetts and Rhode Island for the year ending March 31 were announced by Dr. Arthur Beaumont, state conservationist, Soil Conservation Service.

The tri-state area judges are Robert G. Cooke, assistant vice president, Industrial National Bank, chairman, and Fairman S. Howard, secretary, state Soil Conservation Committee, both of Providence, R.I.; Arthur B. Beaumont, state conservationist, Soil Conservation Service, U.S. Department of Agriculture, Amherst; Charles W. Turner, director Worcester County Extension Service, Worcester; Joseph Ward, supervisor of soil conservation, and Thaddeus Burak, senior inspector, both of the Department of Agriculture, Hartford.

DEALER

(Continued from page 9)

tained the appearance and decor of a 'past-day' feed and fertilizer dealer because customers seem to have more confidence in such an establishment," says Mr. Miller. "In some newspaper advertising, we use a lot of 'old fashion' lettering and have some past-day fixtures in the store. Combined with a modern setting, it takes on an interesting appearance that delights the average customer. As a result, traffic has increased and the profit margin on small purchases increased, all of which adds up to better business for us."

Kraft Bag Promotes Ed Burgers, Jr.

NEW YORK—Ed Burgers, Jr., formerly sales representative in the St. Louis area, has been appointed sales promotion manager for Kraft Bag Corp., with headquarters in New York. His promotion was announced by F. L. Munger, vice president and sales manager of the company.

Mr. Burgers' duties include sale and promotion of the company's automatic open mouth bag filling machine, the "Kraftpacker," in addition to development of new business for multiwall shipping sacks manufactured by Kraft.

By RAYMOND ROSSON
County Agent, Washington County, Tenn.

From the beginning, down through the ages gardens have played a most important part in the lives of people. It all started when the Lord God planted a garden eastward in Eden . . . and there he put man to "dress and keep it."

And later the Lord God sent man forth from the Garden of Eden, to till the ground from whence he was taken. And He said, "Build ye houses and dwell in them, and plant gardens and eat the fruit of them."

People have enjoyed their gardens all the way, from the gardens between the Tigris and Euphrates rivers, the river Jordan, Nile, the Po, the river Rhine, the Seine, the James river of Virginia, even to the gardens in our own back yards, where we live. People should at least use the treasures right at home, instead of looking for treasures elsewhere.

Of all the sciences and arts one of the greatest is "the feeding of animals and human beings."

With these things in mind, your Chamber of Commerce, all civic clubs, garden clubs, home demonstration clubs, FFA members, 4-H clubs, the agricultural extension service and the seed and fertilizer dealers all should encourage every home owner to have a garden . . . and this year, to make the best garden ever.

Everyone should be interested in soils, grass, vegetables, flowers and trees.

Yes, in the poor man's garden grow
Far more than herbs and flowers—
Kind thoughts, contentment, peace of mind,
And joy for weary hours.

—*Howitt.*

152 FFA Chapters Enter Crop Program

NEW YORK—Future Farmers of America chapters in 152 schools in New York and New Jersey have entered the 1956 FFA Crop Demonstration Program sponsored by Cooperative G. L. F. Exchange, Inc., Ithaca, N.Y.

This is a new high for the program begun in New York in 1953, according to Paul Taber, G.L.F. assistant director of public relations and information in charge of farm organization relations. New York entries total 132 and 20 New Jersey chapters are participating, he said.

Demonstrations are carried out by FFA boys as a chapter activity. Crops grown on contrasting plots illustrate the benefits of latest recommendations on varieties, fertilization, seeding and other practices. Pennsylvania chapters are entering this year for the first time, under a pilot program in two counties.

G.L.F. retail agencies provide up to $30 of materials to participating chapters for necessary materials. Awards of $50 go to those judged in the top 10% in each state and chapters in the second 10% receive $25 cash. Every chapter successfully completing a demonstration receives a certificate of participation.

MORMON CRICKETS

(Continued from page 1)

60,000 acres of rangeland in the western states for control of Mormon crickets.

"The above tonnage of bait, plus bait inventory now in storage at points in Idaho, Nevada and Wyoming, will enable the control of Mormon crickets on some 64,000 acres of infested rangeland in spot areas of Colorado, Idaho, Nevada, Utah and Wyoming, during the next three months," Mr. Dutton says. He explained further, that control is accomplished by applying bait by aircraft or ground equipment at the rate of from 5 to 10 lb. an acre, depending on the population of the insects in a given area.

The bait formula, he said, consists of 2 oz. aldrin to ½ gal. Diesel fuel oil sprayed on each 100 lb. steamed rolled wheat or large-flake bran. The period of control in 1956, he said, will probably be from late April through June.

In 1955, under cooperative control programs, 74,128 acres of Mormon cricket-infested rangeland were successfully baited by aircraft and 21,126 acres by ground equipment. States in which the work was done included Colorado, Idaho, Montana, Nevada, Utah and Wyoming. Total cost of last year's Mormon cricket control efforts was $58,879.16, Mr. Dutton said.

Representative Named

HATCH, N.M.—Alton L. Bailey of Anthony, N.M., has been named field representative for Farmer's Market and Supply Co. here, according to Claybourne Wayne, manager. Mr. Bailey will advise farmers on feeds, fertilizers and insecticides. For the past five years, he has been with Southwest Fertilizer and Chemical Co.

Florida Consumption

TALLAHASSEE — Fertilizer consumption in Florida during February totaled 211,944 tons, according to the state Department of Agriculture. This included 152,623 tons of mixed goods and 59,321 tons of materials.

Dr. Donald F. Starr

RYANIA REPRESENTATIVE—Donald F. Starr has been named American representative for the Trinidad Ryania Corp., the firm has announced. Ryania insecticides will be marketed in the U.S. for control of numerous agricultural pests including the European corn borer, sugarcane borer, cranberry fruitworm, codling moth and certain household insects. Dr. Starr is making his headquarters at 256 N. Mountain Ave., Upper Montclair, N.J.

James S. Greene

James S. Greene Named Representative For Ashcraft-Wilkinson

ATLANTA, GA.—Ashcraft-Wilkinson Co. has announced that James S. Greene, assistant agronomist with the National Plant Food Institute, Washington, D.C., will become A-W sales representative in Minnesota, Iowa and Missouri as of April 20.

Mr. Greene, a graduate of the University of Missouri, with a B.S. degree in agriculture, is a statistician, general agronomist, and handled a major portion of the audio-visual education program at NPFI. He will make his headquarters in Des Moines, Iowa.

He has been with the National Plant Food Institute and the former National Fertilizer Assn. since October, 1954.

Program Set for Central California Agricultural Forum

FRESNO, CAL. — Program arrangements are complete for the Central California Agricultural Forum to be held at the Hacienda Motel, Fresno, April 26.

William A. Harvey, extension weed specialist of the University of California, Davis will be moderator of a panel on "Weed Control in Trees and Vines." Appearing on this portion of the morning program with Dr. Harvey, are Dr. Boysie E. Day, plant physiologist, Univ. of California, Riverside; Vincent H. Schweers, farm adviser of Tulare county; and Jack R. Fleming, farm adviser of Fresno county.

Charles Dick of the California State Department of Agriculture, will describe the State's permit system for using hazardous chemicals in agriculture.

The afternoon program will include the following papers: "Fertilizing Rangeland," by Dr. William E. Martin, extension soil specialist, University of California, Berkeley; "Water Needs and Plans for Distribution," by Harvey O. Banks, state engineer, department of public works, Sacramento; "Flood Control Problems and Plans," Lt. Col. A. D. Wilder, acting district engineer, Corps of Engineers, U.S. Army, Sacramento; and "Water Development and Legislative Problems," Wm. W. Hansen, assemblyman, thirty-third district, State of California, Sacramento.

President of the CCAF is L. K. Stromberg, Fresno. Other officers are Richard O. Schade, Visalia, Cal., vice president; David N. Wright, P. O. Box 791, Bakersfield, Cal., secretary; and Vernon E. Burton, Bakersfield, treasurer.

NPFI MEETING

(Continued from page 1)

bers will report to the membership on "One Year of Service to Our Industry" June 11.

Other outstanding features at the June 12 session will include:

Showing of the institute's new film, "What's In The Bag"—a motion picture featuring the technology of fertilizer production in a down-to-earth presentation.

Presentation of the "Soil Builders Award for Editors" winners of the institute's annual contest sponsored with approval of the American Agricultural Editors' Assn.

The annual business session of the institute also will be held June 12, at which officers will be elected and 12 members named to the board of directors. Meetings of the board of directors will be held June 10 and June 13.

A special program of recreation has been planned.

Fertilizer Industry Injury Rate Up Slightly

WASHINGTON — The injury-frequency rate for the fertilizer industry averaged 15.4 disabling injuries per million man-hours worked during 1955, according to preliminary statistics compiled by the U.S. Department of Labor's Bureau of Labor Statistics.

This compares with a rate of 15.2 in 1954. The injury-frequency rate of all manufacturing industries in 1955 was 12.1, compared with 11.9 in 1954.

Insect Control Tests Scheduled in Klamath

SACRAMENTO—Experiments will be conducted this spring in the Klamath National Forest on how to keep insects out of pine and fir cones and how to prevent rodents from eating seed sown for forest regeneration.

Insects destroy so many cones, according to Russell W. Bower, supervisor, that about one tenth of the 110,000 cut over annually in the national forest must be reseeded artificially. Rodents then remove and eat a high proportion of the seeds which cost from $3 to $4 per pound.

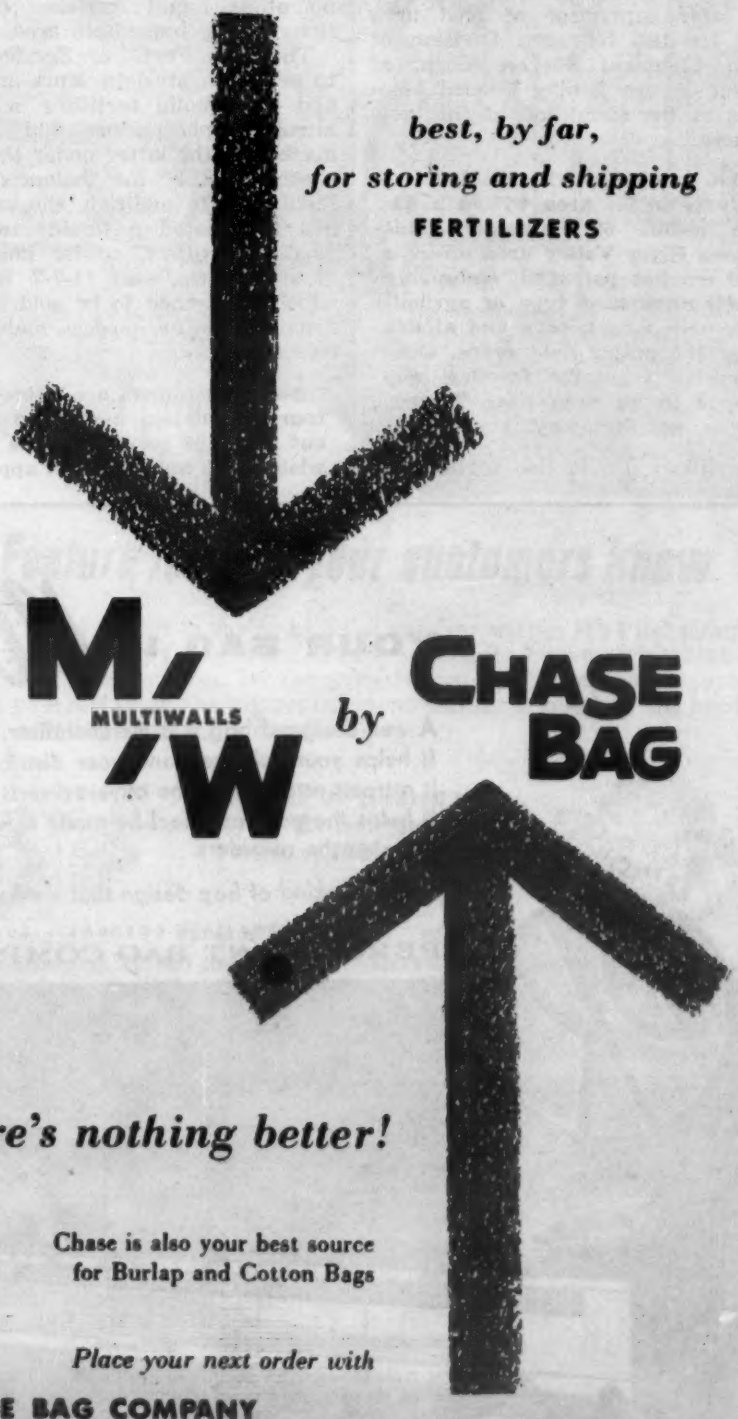
Mr. Bower said the Wyerhaeuser Lumber Co. of Washington and Oregon pioneered air spraying of conifers last year with considerable success.

The California Range and Forestry Experimental Station has developed a cone spray which will be tested by Ranger Ted Simpson. Tests also will be run in the Six Rivers, Shasta-Trinity and Stanislaus National Forests.

Rodents will be watched for their reaction to seeds treated with a new repellant, WRL-2. The chemical is non poisonous to humans or wild life.

Sales Clinic

NEW YORK — The fifth annual Chemical Sales Clinic, sponsored by the Salesmen's Association of the American Chemical Industry, will be held Oct. 15 at the Hotel Commodore, New York, it has been announced by Preston F. Tinsley, chairman of SAACI's Sales Clinic Committee.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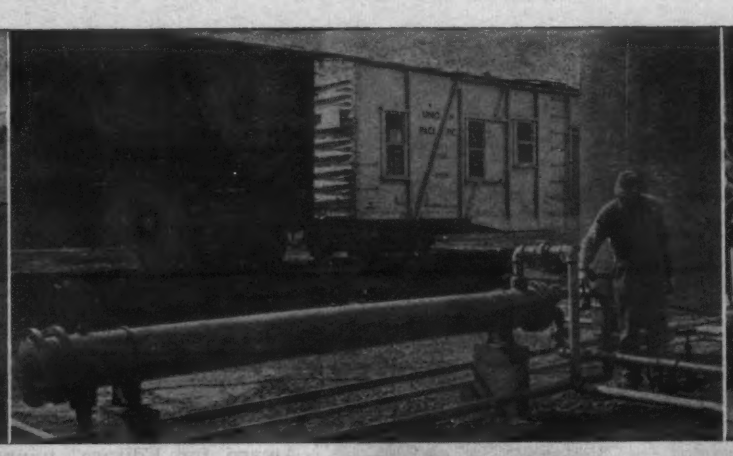

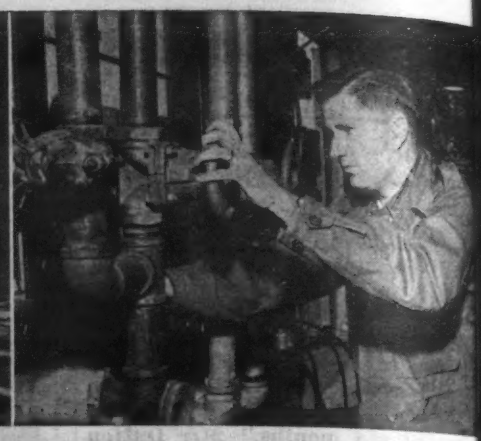

AT NEW KAW FERTILIZER FIRM—A newly-formed company, Kaw Fertilizer Service, Inc., Lawrence Kansas, is marketing products in a 60-mile radius of plant. Across top of page: customer loads tank trucks and applicator tanks at new plant. Special meter and air eliminator system assures accurate delivery. Center photo shows Butler heat exchanger, through which anhydrous ammonia is converted to aqua ammonia directly from tank car or transport. Photo at right shows Dean McHard, president and general manager of the new firm, at the control area, regulating the flow of ingredients to and from mixing and storage. Lower photo depicts interior view of plant's main building. Control area is in the corner background. Mixing tank is below floor, with access through trap door in the foreground.

New Liquid Fertilizer Firm Emphasizes Customer Service For Farmers in Kansas Area

LAWRENCE, KANSAS—A newly formed company, the Kaw Fertilizer Service, Inc., is in operation with the first liquid fertilizer mixing plant in this vicinity. President and general manager of the new firm is Dean McHard who is in active charge of operations. A graduate of Oklahoma A&M College in agronomy in 1951, Mr. McHard was field representative and later supervisor of feed urea sales for the Nitrogen Division of Allied Chemical & Dye Corp. at Omaha, before joining several associates in the formation of this new business.

The company will market its products in an area within a 60-mile radius of Lawrence. This Kansas River Valley area offers a good market potential, embracing a well diversified type of agriculture, with wheat, corn and alfalfa being the major field crops. Consciderable vegetable farming also is done in an area near Turner, Kansas, not far away.

"Fertilizer use in this section has been only partially developed," Mr. McHard declares, "but with well irrigation increasing steadily, it offers an exceptionally good opportunity for a liquid fertilizer operation." Lawrence has two other special advantages in that there is a phosphoric acid and an ammonia producing plant in town, affording a handy source of these materials. There are no other liquid fertilizer installations in the immediate area.

The Kaw Fertilizer Service plans to sell both straight aqua ammonia and also liquid fertilizer mixes of nitrogen, phosphorus and potash, marketing the latter under the trade name of "BLF" for "balanced liquid fertilizer." In addition, the company has formulated a liquid lawn and garden fertilizer, to be known as "Lucky Lawn," an 11-7-7 formula, which is planned to be sold through distributors in larger midwestern cities.

Farm customers are offered custom formulation and three different kinds of service. If the buyer wishes, the company will apply the fertilizer on the farm using the agent's own tank and applicator. The company offers to rent the necessary tank and applicating equipment to the farmer or sell him the application equipment for his own use.

The new concern will have trucks operating throughout the area, but Mr. McHard expects most farmers to pick up their own supplies. "Liquid fertilizer will not sell itself," he says. "It is new and it must be sold to the customer." So, he is making plans for plenty of outside selling activity and service to his customers.

Mr. McHard plans to start operations this spring with a big open house at the new plant and a field day, during which demonstrations will be made to show how liquid fertilizer is handled and applied. This will be followed up by a series of farmer meeting programs throughout the territory and backed up with extensive direct mail and newspaper advertising.

In the acid neutralization process employed in the new Kaw Fertilizer plant, phosphoric acid, aqua ammonia, and water are delivered to the mixing tank. After the ammoniation of the acid has proceeded for a time, solid materials such as potash, or urea if needed, for high nitrogen formulations are put in the mix. No curing is required and the product can be sent directly to the customer's truck tank or put into storage tanks.

The plant has a capacity of 10 tons per hour of mixed fertilizer and was designed and built by the Butler Manufacturing Company, Kansas City, Missouri.

Storage facilities of this plant consist of a black steel tank with Flexi-Liner for 75% phosphoric acid; aqua ammonia and balanced formulations are stored in a number of untreated black steel tanks.

Both aqua ammonia and grades of balanced liquid fertilizers can be produced. Through a Butler-designed converter and heat exchanger, anhydrous ammonia is converted to aqua ammonia directly from tank car or transport. Aqua is supplied for direct application as 20-0-0 and also used as one nitrogen source in the mixing of balanced liquid fertilizer.

Meters accurate to one-tenth of 1% control the flow of the liquid nutrients used in formulating, and close control of every step in the blending process assures the customer of an accurate and completely neutral plant food.

YOUR BAG IS *not* AN EXPENSE ITEM

A well-designed bag is a merchandiser.
It helps your salesmen and your distributors.
It attracts attention of the buyer, diverts attention to your product.
It helps the purchaser feel he made a wise choice, helps him remember your product when he re-orders.

This is the kind of bag design that we have specialized in at Percy Kent.

SINCE 1885

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PERCY KENT BAG COMPANY, INC.
KANSAS CITY • MINNEAPOLIS • OKLAHOMA CITY
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Scratchboard drawing of our Kansas City plant . . . an excellent technique for bag printing. Do you like it?

More Firms Register For California Sales

SAN FRANCISCO—Twenty-three firms have registered in California since the middle of December to sell commercial fertilizers in the state for the current fiscal year, ending June 30. In one case the registrant is a change of name only from the United Fertilizer Co. of Richmond to United-Heckathorn Co.

Of the 23 firms, 11 are located in northern California, five in southern California, and the remaining seven are out of the state.

In addition to these 23, the California Bureau of Chemistry of the State Department of Agriculture also reports nine firms registering since Dec. 14 to sell agricultural minerals.

Hercules Adds to Sales, Service Staff; Opens New Office

WILMINGTON, DEL. — The addition of five men to the technical service and sales staff of the agricultural chemicals division, of Hercules Powder Co., was announced here April 3 by Richard T. Yates, manager of the division.

At the same time, Mr. Yates announced the establishment of a new sales office in Greenville, Miss., under the direction of Leonard V. Edwards, who was formerly located at Hercules' Dallas office.

The five additional men have been assigned as follows:

Arthur A. Chadwick, technical assistant, advertising department, Wilmington; Marvin H. Frost, Jr., technical service representative, Los Angeles; Richard D. Griffith, technical service representative, Greenville, Miss.; Ernesto J. Groskorth, technical service representative, export department, San Salvador, El Salvador, and Thomas J. Walker, Jr., technical service representative, Wilmington.

Mr. Chadwick is a graduate of Penn State University with a B.S. degree. He majored in agricultural economics and joined Hercules shortly after completing his military service.

Mr. Frost, who is working out of the company's Los Angeles office, graduated from the University of Arizona with a B.S. degree, majoring in agriculture, and also has a master's degree in entomology from the same institution. He has been associated with the U.S. Department of Agriculture Bureau of Entomology and Plant Quarantine, the USDA Forest Service, Arizona Game and Field Commission, and the Citrus Experiment Station, University of California.

Mr. Griffith is a graduate of Texas A&M, where he obtained a B.S. degree and a master's degree in entomology. Before joining Hercules he was associated with the State Health Department in Texas, as medical entomologist, and also was an extension entomologist in the Rio Grande Valley. He also served as farm director of radio station KGBT, Harlingen, Texas.

Mr. Groskorth obtained an M.S. degree from the University of Maryland, with his major work being in entomology. A native of El Salvador, he returned to that country after graduating from Maryland. In El Salvador he did research in a program for the control of corn and sugar cane insects, and also supervised a project that involved cotton insect control on 100,000 acres of cotton.

Mr. Walker is a graduate of the University of Delaware with a B.S. in animal industry. He entered the Hercules organization recently, following completion of his military service.

W. Mayo Smith, Jr.

Horace W. Boynton

Escambia Bay Appoints Two to Research Positions

PENSACOLA, FLA.—The appointments of Horace W. Boynton and W. Mayo Smith, Jr., as assistant directors of research for Escambia Bay Chemical Corp. were announced recently by Dr. N. C. Robertson, director of research.

Mr. Boynton will be in charge of engineering and of fertilizer research. He is a graduate of Lehigh University and comes to Escambia from North American Cyanamid, Ltd., where he was in charge of development at its Welland plant.

Dr. Smith will be in charge of polymerization and plastics research and development. He was graduated from the University of Maryland with a Ph.D. in organic chemistry. Dr. Smith comes to Escambia from Firestone Tire & Rubber Co., where he was senior research chemist and group leader.

Escambia Bay's research and pilot plant work is now being conducted in Cambridge and Newton, Mass.

A new plant was recently dedicated at Pensacola, Fla., for production of ammonia, ammonium nitrate and fertilizer solutions. (See page 1 of the Feb. 27 issue of Croplife.) Construction is now under way at the same site for a 30 million pound polyvinyl chloride resin plant to be completed by the fourth quarter of this year.

New Warehouse

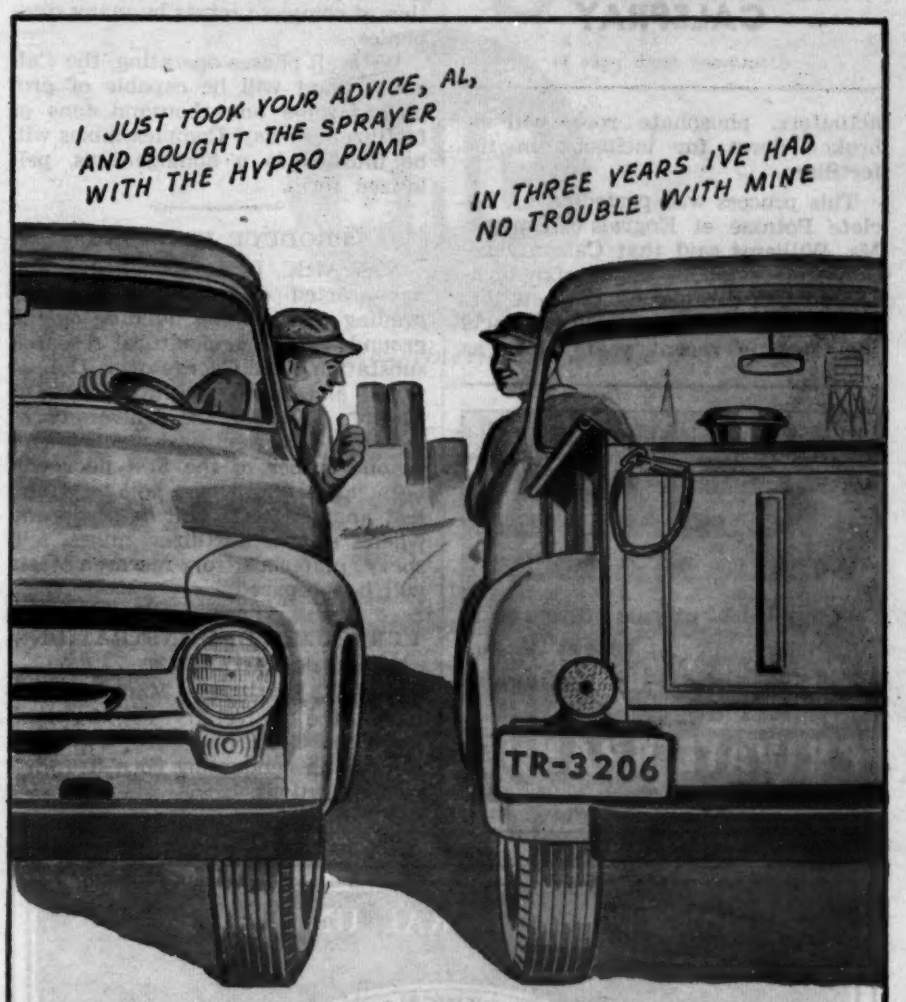
SEAFORD, DEL. — The Huston-Culver Fertilizer Co. here has opened a new branch warehouse between Denton and Hillsboro. Wayne Boggs of Seaford is manager. The warehouse has capacity for about 100 tons of bagged fertilizer, and it is adjoined by a tank for liquid fertilizer.

National Nitrogen Solutions Group To Meet

SIOUX CITY, IOWA — The 1956 convention and trade show of the National Nitrogen Solutions Assn. will be he'd at Sioux City Oct. 16-17. Chairman of the convention committees are George Serviss, G.L.F. Soil Service, Ithaca, N.Y., program; William Spargur, Delavan Manufacturing Co., West Des Moines, Iowa, exhibits; Ray Bernhardt, Nitrogen Division, Allied Chemical & Dye Corp., Omaha, and Joe Tuning, Spencer Chemical Co., Grand Island, Neb., co-chairman, entertainment and friendship hour; and R. W. West, Tryco Manufacturing Co., Decatur, Ill., advance publicity.

ANTI-MOSQUITO UNIT

TRENTON, N.J.—The New Jersey state Senate has approved a measure to create a seven-member state Mosquito Control Commission.



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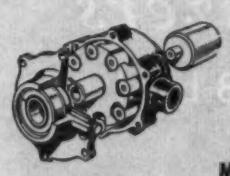
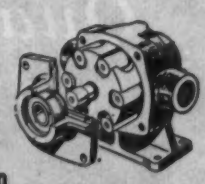
You'll find that it is easier to sell a sprayer with a HYPRO pump because so many farmers are already sold on its long-wearing high-performance features. By carrying Hypro pumps separately, you cut yourself in on the big replacement market created by the need for refitting existing sprayers.



HYPRO Originated the Nylon Roller Pump for Farm and Industrial Use



MODEL N7500

For pressures up to 350 lbs. sell this heavy-duty pump with 8 nylon rollers. Ni-Resist housing and rotor resist corrosion and erosion. Has cartridge-type seals, stainless steel shaft. Delivers up to 30 gal. per min.

MODEL C6000

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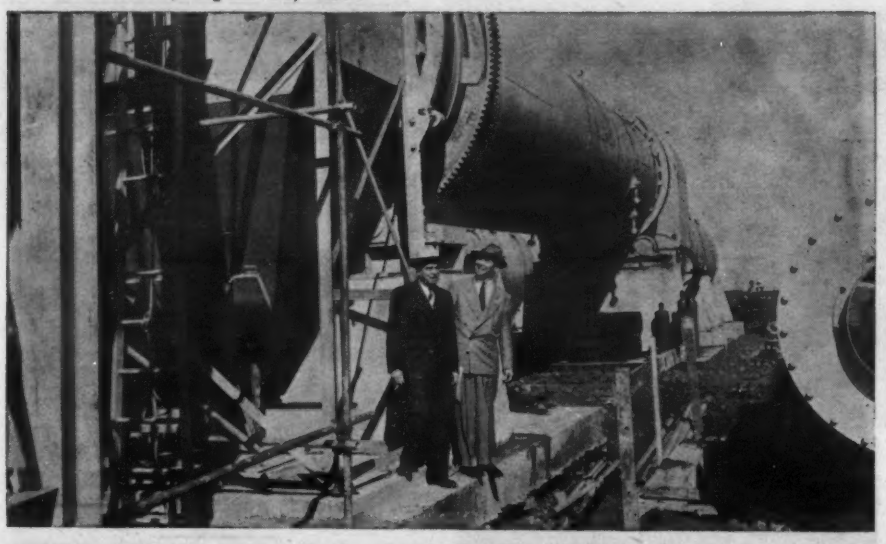


NEW CALSPRAY PLANT—P. S. Williams, chief engineer for Calspray, left, and J. B. Stichka, project engineer, look over progress of construction of new complex fertilizer mixing plant being built near Calspray's main office and plant at Richmond, Cal. The machine in the background is a rotary dryer that both dries and firms the granules of the new type pelletized fertilizer.

CALSPRAY

(Continued from page 1)

actuators, phosphate rock will be broken down for inclusion in the fertilizer.

This process was perfected by Societe Potasse et Engrais Chemique. Mr. Williams said that Calspray became interested in the foreign technique when considering the new fertilizer plant because sulfuric acid shortages in recent years, such as 1950 and 1951, had curtailed production of complete mixes by many companies.

With all phases operating, the Calspray plant will be capable of producing some one thousand tons of fertilizer per day. Complex mixes will be finished in a homogeneous, pelletized form.

PRODUCE BUILDING

NEWARK, DEL. — Construction has started on a model produce-grading and packing building on the grounds of the agricultural research substation near Georgetown, Del., it was announced recently by Dr. Chester Hitz, of the University of Delaware horticultural department. In one corner of the first floor will be a laboratory where soil tests and leaf analysis tests will be made and where special fertilizer mixes and spray materials for research tests will be prepared.

FERTILIZER DEMONSTRATIONS

ELKTON, MD. — The Eastern Shore Fertilizer Manufacturers Assn., the University of Maryland and Cecil County will cooperate this summer in conducting corn fertilizer demonstrations.

Rains Delay Land Preparation on Mid-South Farms

MEMPHIS, TENN.—Heavy rains have delayed land preparation on most Mid-South farms, but some cotton farmers in East and South Arkansas managed to do some early planting.

While rain stymied most Mississippi farmers, extension officials pointed out the downpours aided in settling roughly prepared seed beds.

Agriculture officials in Mississippi and Arkansas issued warnings against planting cotton too early.

Kenneth S. Bates, assistant extension director in Arkansas, said this year's subsoil moisture is much better than last year and that, on the whole, Arkansas farmers made "very fine progress" during March in field preparation.

W. R. Thompson, Mississippi extension agronomist, noted that farmers are applying higher rates of fertilizer than usual this year, aiming at higher production per acre.

Chesley Hines, Mississippi extension horticulturist, said tomato and pepper planting in the Crystal Springs area is about completed. The bean crop in that area has also been planted and some beans are up to a good stand.

Watermelon planting was reported underway in central and South Mississippi.

Judd Brooks, West Tennessee district extension agent, said in Jackson that heavy rains "virtually halted all farming operations in the area but did not leave enough surface water to impair farming more than a few days."

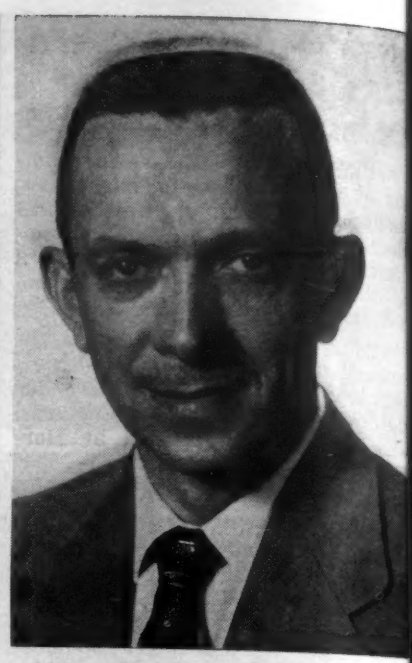
CSC Expansion Plans Outlined at Stockholders' Meeting

BALTIMORE — J. Albert Woods, president of Commercial Solvents Corp., informed stockholders at the annual meeting here recently that the company will spend $10,000,000 during the coming year to expand production of methanol and petrochemical derivatives.

New construction will expand the Sterlington, La., methanol plant, and will provide additional facilities at the Terre Haute, Ind., plant to process the company's basic products into upgraded chemical derivatives, Mr. Woods said.

Net earnings for 1955 were $3,451,813 or $1.31 a share of common stock, compared with $2,668,342 or $1.01 a share in 1954. The company's net sales increased from $51,608,349 in 1954 to $56,623,754 last year.

Mr. Woods reported that the Northwest Nitro-Chemicals, Ltd., plant at Medicine Hat, Alberta, Canada, the building of which was started in July, 1955, should be completed late in the current year. Commercial Solvents owns 42.7% of the equity stock of this new company, and will operate it under a long-term management contract.



Dr. M. S. Williams

Plant Food Institute Names M. S. Williams to Chief Economist Post

WASHINGTON — Dr. M. S. Williams, specialist in charge, extension farm management and marketing at North Carolina State College since 1954, will become chief economist of the National Plant Food Institute, beginning July 1, Dr. Russell Coleman, executive vice president of the Institute has announced.

In his new position, Dr. Williams will develop programs designed to focus attention on the economic value of using fertilizers properly.

Dr. Williams is a native of Orange County, North Carolina, where he farmed from 1938 to 1939. He served in World War II and holds a commission as major in the United States Army Reserve.

From 1947 to 1954 he was farm management specialist in the department of agricultural economics, with the North Carolina agricultural extension service. He served as acting head of the extension farm management department from 1949 to 1950, while the head of the department was away for graduate study. From May, 1954, to date he has been specialist in charge, extension farm management and marketing at the college.

Dr. Williams received both his B.S. and M.S. degrees in agricultural economics at North Carolina State College. He was awarded his doctorate in agricultural economics by Purdue University in 1954, and holds membership in a number of agricultural and academic societies. He has also written numerous articles for various newspapers and agricultural publications.

In commenting on Dr. Williams' decision to join the Institute, Dr. Coleman said: "We are pleased that Dr. Williams is joining our staff, for we recognize the need for closer cooperation with the nation's agricultural economists, particularly at the land-grant college level, in emphasizing the economic research values of plant foods in relation to the other major factors entering into a sound land management program."

Lime, Fertilizer Are Best Bargains for Livestock Men, Rutgers Meeting Told

NEW BRUNSWICK, N.J. — Lime and fertilizer are the livestock producer's best bargains, Thomas E. Milliman, research department, Grange League Federation, Ithaca, N.Y., told a dairy and livestock open house at the Rutgers College of Agriculture here recently.

Pastures are a prime market for lime, ready to exchange in terms of milk or meat $3 or more for each dollar's worth of lime, said Mr. Milliman. He declared that the New Jersey-New York-Pennsylavnia area receives less than two thirds of the lime needed to put back the calcium annually removed by crops, cattle, leaching and erosion, to say nothing of correcting acidity that exists on many soils.

"Cropland pastures in the Northeast are running at half-speed or less in terms of the numbers of cattle these best-located and presumably well-tended grazing fields can support," he said. "Actually our best pastures are not well-tended or certainly no more than half-fed."

Earlier Mr. Milliman pointed out that hay yields in the three states have been brought up to an average of 1.70 tons an acre in 20 years with not much purchased fertilizer.

Continuing his theme of greater prosperity from more adequately fertilized hay, he declared that additional fertilizer with a higher content of nitrogen would easily raise the level of production from 1.70 tons to 2.5 tons to the acre, using only three quarters of the response shown by experiment stations to be an expected average.

"Nitrogen alone, applied to the 5¼ million acres of all hay in the three states, rather than to the 786,659 acres that were actually fertilized, would result in an increase of three quarter million tons of hay, when used at the rate of not more than 40 pounds of actual N per acre," he said.

"That is a jump of about 25% in yield. Many have done it on individual farms with nitrogen, and others using complete fertilizer easily average three tons to the acre. These are samples of the possibilities."

The Northeast will continue to be livestock country, predicted Mr. Milliman, and "our better grasslanders need bow to no other part of the nation in the struggle which is ahead. Our costs are low and can be made lower." He said he could foresee success for a Rutgers experiment intended to develop by selective breeding a strain of cows with high forage intake and low grain demand in terms of milk production.

Dr. John W. Bartlett, chairman of the Rutgers department of dairy industry, reviewed the 25-year study he has directed to increase the butterfat percentage of Holstein milk through inbreeding and selection, plus the extensive use of proved sires.

Other speakers, who discussed livestock feeding, were Dr. Ralph Elliott of Lederle Laboratories, Pearl River, N.Y.; George W. Vander Noot, chairman of the Rutgers animal husbandry department, and Bruce R. Poulton of the dairy industry department.

Attending the conference, intended to be the first of an annual series, were farmers, servicemen and others.

C. J. Watts, Jr.

C. J. Watts Named District Sales Manager by CSC

NEW YORK — Commercial Solvents Corp. is expanding its marketing and distribution organization for agricultural chemicals in the South, according to Clyde T. Marshall, general manager of the company's agricultural chemicals dept.

C. J. Watts, Jr., has been named southeastern district sales manager and will make his headquarters in a new office located at 344 Williams St., N.W., Atlanta. Mr. Watts was previously a sales representative for CSC in the South.

The southeastern district includes Alabama, Georgia, Florida, North and South Carolina.

Gloomicides

A baseball player squelched a heckler near the bench by telling him this story in soft tones: "You know, when I was a boy, my father had a jackass on our farm and he used to bawl me out for teasing that jackass. He warned me that when that jack died, he'd come to haunt me in some form. You know, I never believed my father until today."

★

The summer day had been particularly tiring. The courtroom was sweltering by midafternoon. Finally, a plump colored woman, charged with shooting her husband in the leg, chest, arm and "two other places" was brought to the stand.

The Prosecuting Attorney, obviously trying to mislead the defendant, asked, "And did your husband give you any evidence of intoxication on this occasion, Aunty?"

Aunty was not so easily misled. "Mistah Lawyer," she responded, "dat sorry man ain't nevah give me nothin'!"

★

World's most glaringly prominent object: A blonde's hair on the coat lapel of a dark suit observed by a brunette wife.

★

And many a man who proposed on his knees, has spent the next 10 years trying to get back on his feet.

★

A little girl was spending her first night away from home. When it began to get dark she commenced to cry. "Why, dear," said her hostess, "what is the matter? Are you homesick?"

"No," was the reply, "I'm heresick."

★

In the grammar class, one day, the teacher wrote on the blackboard: "I didn't have no fun at the seaside."

Then she turned around to her pupils and said to one: "Roland, how should I correct that?"

"Get a boy friend."

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Croplife®

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Northeastern states.

Farmers Must Create Their Own Soil Banks This Year

While so much attention is being directed toward controlling farm surpluses and what to do with land temporarily not needed for crops, there is a dangerous tendency to underrate the need for maintaining unused acres, preventing erosion, and keeping fertility levels high.

The soil bank idea seems to point in the right direction with its encouraging farmers to maintain their set-aside plots in good shape for the inevitable day when they will once more be needed. If this type of legislation should be passed, it would probably mean the sale of additional tons of fertilizer to maintain pasture land in keeping with the provisions of the bill. However, from all appearances, the delays in Congress brought on by endless debate, have already doomed the effectiveness of this type of legislation so far as the 1956 season is concerned.

It follows, therefore, that if this type of market is to be exploited by the trade, the job will have to be done on the local level through the various plant food companies and their dealers. That requires just plain hard work. It means talking it up.

It is true that over the years, American agriculture has been prodigal in the careless manner with which soil resources have been handled. Various authorities estimate that more than 200 million acres of cropland in the U.S. have been either lost or severely damaged through lack of care.

While in short-sighted perspective, this waste at the present time may not seem to be particularly important in view of farm surpluses, it is none-the-less a serious matter. Soil conservation experts say that despite our efforts to maintain soil, we are presently losing more productive land each year through soil erosion and depletion than we are gaining through various forms of reclamation.

Everyone knows that in the early days, when population was smaller, productive land was seemingly inexhaustible, and people had but little concern for its possible decline. That time is of course now long since past and one of the most basic problems of the present time is that of maintaining and improving the soil which is really our most valuable physical asset.

Farmers in many quarters may need to be reminded that topsoil cannot be stock-piled, mined, dredged from the sea, grown, nor manufactured. There is only a certain amount available, and no more.

Obviously, the plant food industry has a large stake in maintaining fertility of the soil, whether the land be in active use or not. The volume of fertilizer sales is not likely to be kept up by its own momentum. This season will require an extra amount of merchandising effort to overcome the influence of high costs of crop production and the continual agitation stirred up by politicians during this election year.

Land is true wealth, but it can remain valuable only so long as its fertility is maintained and its irreplaceable topsoil kept intact. The wise application of fertilizer materials to promote growth of thick stands of grasses can accomplish much. It's a worthy selling point.

Forest Pests Offer Big Market Potential

Every year, a large quantity of pesticidal chemicals is used in the control of insects that infest forest areas. This phase of the business offers a considerable potential to the pesticide trade, particularly since the value of timber is constantly rising. Under such conditions, the depredations of insects become more intolerable than ever before, and forest lands, both public and private, must have adequate protection.

Much smoke has been raised about fire being a great destroyer of timberland, and indeed it does cause much loss each year. It is a spectacular type of damage and the public is kept very aware of this hazard. Yet, according to reliable figures, insects do many times more damage to forests.

James A. Beal, chief of the division of forest insect research, of the USDA forest service, says that the ratio of insect damage over that caused by fire, is 7 to 1. Insects also outrank diseases by 2 to 1, which makes control of various species of tree-attacking bugs a very important economic matter.

In a paper given at the recent North Central Branch meeting of the Entomological Society of America, Mr. Beal pointed out that despite considerable amounts of progress having been made in the control of forest pests in the past decade, the insects still rate top ranking among the causes of timber mortality.

Insect damage, he said, is responsible for 28% of the mortality of timber of commercial size, and 40% of the mortality of trees of sawtimber size. In a recent year, insects are estimated to have killed six billion board feet of sawtimber and an additional 2 million cords of pulpwood. Trees are damaged in many other ways by insects, even if the trees are not completely killed.

The pesticide industry, including of course, the manufacturers, distributors, dealers and custom sprayers and dusters all have a great deal to gain in keeping an eye on this type of market even more closely than has been done. As Mr. Beal says, great progress has been made during the past 10 years or so, but there is still a considerable distance to go in using insecticides and fungicides to their optimum economic limit. And this limit has not yet been reached. It will be interesting to see how much nearer that goal we may move this year.

Cut Those Unit Costs!

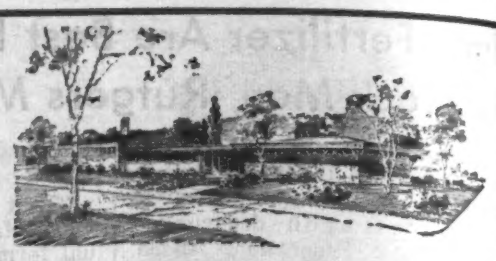
Economists are pretty solidly agreed that the only solution for making ends meet in today's agricultural economy, is to snip off overhead in every possible way, reduce production costs, and grow as much as you can on as few acres as possible.

Probably no group knows this more acutely than does the cotton industry which has experienced big surpluses for a number of years, in the face of severe competition from synthetic fibers. H. G. Johnston, head of research development for the National Cotton Council, described in a recent talk what a big difference it makes when production costs are cut down. He said that this phase "is one of the most dynamic aspects of our whole industry."

The applying of modern production practices has already proved beneficial. Last year, for example, despite a wet season and some of the worst insect conditions in history, growers produced an all-time high average of 416 lb. lint an acre, 22% better than the previous record year and 50% better than the 10-year average, 1944-53.

Good reasons appear for this. A two thirds increase in the amount of fertilizers, an eight-fold increase in insecticides and the tentative acceptance of chemical harvest aids and herbicides have all played important parts in the savings in unit production costs.

"Our chief hope for continually pushing our costs downward; our hope for achieving a better relative price position for cotton in the future, is built on the idea of maintaining or speeding up our rate of technological progress," Mr. Johnston concluded.



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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MEETING MEMOS

May 7-9—Carolinas-Virginia Pesticide Formulators Assn., Inc., Spring Meeting, Ocean Forest Hotel, Myrtle Beach, S.C.; W. R. Peele, 516 S. Salisbury St., Raleigh, N.C., secretary-treasurer.

May 10-11 — Governor's Safety-Health Conference, Lord Baltimore Hotel, Baltimore, Md. Fertilizer safety portion May 11. A. B. Pettit, Administrator of Industrial Health and Safety, Davison Chemical Co., Baltimore 3, chairman.

May 15 — Western Agricultural Chemicals Assn., Spring Meeting, Hotel Clark, Los Angeles, C. O. Barnard, 2466 Kenwood Ave., San Jose, Cal., executive secretary.

May 16-18—Synthetic Organic Chemical Manufacturers Assn., Annual Outing, Skytop, Pa.

May 20-22—42nd Mid-year Meeting, Chemical Specialties Manufacturers Assn., Drake Hotel, Chicago; H. W. Hamilton, secretary, 50 E. 41st St., New York 17.

May 25—Fertilizer Section, Virginia Safety Association, Roanoke Hotel, Roanoke, Va.; W. C. Richardson, Southern States Cooperative, Richmond, program chairman.

June 5-6—North Central Division, American Phytopathological Society, Kansas State College, Manhattan, Kansas.

June 10-13—National Plant Food Institute, Annual Convention, the Greenbrier, White Sulphur Springs, W. Va.

June 20-22—Northeast Branch, American Society of Agronomy, Summer Meeting, University of Maryland, College Park, Md.

June 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., secretary-treasurer.

June 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

July 12—South Carolina Fertilizer Meeting, Tour of Edisto Experiment Station, Blackville, S.C.

July 19-20—Southwestern Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

July 25-27—Northwest Association of Horticulturists, Entomologists and Plant Pathologists Conference, Northwest Washington Experiment Station, Mount Vernon, Wash.

Aug. 1—Kentucky Fertilizer Conference, Guignol Theatre, University of Kentucky, Lexington, Ky.

Aug. 17-25—Tenth International Congress of Entomology, McGill University and University of Montreal, Montreal, Canada, J. A. Downes, Science Service Bldg., Carling Ave., Ottawa, Ontario, Canada, Congress Secretary.

Aug. 22-24—Beltwide Cotton Mechanization Conference, Atlanta Biltmore, Atlanta, Ga., sponsored by National Cotton Council.

Oct. 15 — Fifth Annual Chemical Sales Clinic, the Salesmen's Association of the American Chemical Industry; Hotel Commodore, New York City; chairman, Preston F. Tinsley, Westvaco Chlor-Alkali Division, Food Machinery and Chemical Corp., 161 East 42nd St., New York 17, N.Y.

Oct. 15 — Fifth Annual Chemical Sales Clinic, Hotel Commodore, New York, Sponsored by the Salesmen's Association of the American Chemical Industry.

Oct. 16-17—National Nitrogen Solutions Assn., Annual Meeting and Trade Show, City Auditorium, Sioux City, Iowa; John White, Auburn, Neb., secretary.

Nov. 11-13 — California Fertilizer Assn., 33rd annual convention, Del Coronado Hotel, Coronado, Cal.; Sidney H. Bierly, executive secretary, 475 Huntington Drive, San Marino 9, Cal.

Nov. 19-20 — Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., secretary.

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North Carolina Shipments

RALEIGH, N.C. — February fertilizer shipments in North Carolina totaled 178,085 tons, compared with 201,650 tons in February, 1955, according to the state Department of Agriculture. Shipments in the first eight months of this fiscal year (July-February) totaled 489,821 tons, compared with 575,653 tons in a corresponding period a year earlier.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $9 per column inch.

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FOR FAST ACTION AND RESULTS try Croplife's CLASSIFIED ADVERTISING

E. Osborn Foster Joins Balfour, Guthrie

LOS ANGELES—E. Osborn Foster has joined the sales staff of the fertilizer division of Balfour, Guthrie & Co., Ltd. He will be attached to the Los Angeles office, but will be stationed in Phoenix.

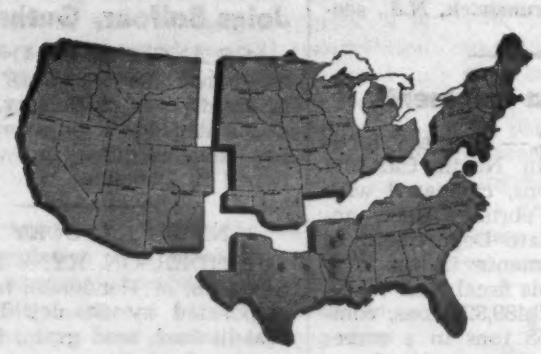
NEW KENTUCKY FIRM

HENDERSON, KY. — The Stanley Sales Co. of Henderson has been incorporated by Stanley Hoffman to deal in feed, seed grain, farm equipment and fertilizer.

SOIL PEST CONTROL PAYS—Edward C. Scribbins, Doane's Agricultural Service, left, holds hill of corn from a field treated with soil insecticide, while Elbert Dennis, Webster City, Iowa, holds untreated hill. The two men are demonstrating the difference in corn growth made by controlling soil insects. Mr. Scribbins, who manages the farm, and Mr. Dennis, had a corn rootworm problem which they solved by applying aldrin in fertilizer. Soil insecticides are now being applied by farmers throughout the corn belt for the coming season.

CROPLIFE's sharp, incisive reporting is studied every 7 days by the agricultural chemical industry . . .

CROPLIFE's spot diagnosis of the shifting agricultural chemical scene represents a powerful influence on this 2 billion dollar market . . .



In addition to its national coverage, Croplife offers a selective regional circulation plan in these crop-areas

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Croplife's carefully controlled circulation provides national coverage weekly of manufacturers, formulators, mixers and ingredient suppliers.

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